

SAN MARCOS TECHNICAL MANUAL



AUGUST 18, 2017
CITY OF SAN MARCOS

CONTENTS

APPENDIX A. DESIGN GUIDELINES B:1

ARTICLE 1: CD-5D & CD-5 DESIGN GUIDELINES	B:2
ARTICLE 2: SIGN GUIDELINES	B:8
ARTICLE 3: PLANNING AREA AND REGULATING PLAN DESIGN	B:16
ARTICLE 4: ILLUSTRATIVE PLAN: MIDTOWN	B:28
ARTICLE 5: ILLUSTRATIVE PLAN: MEDICAL DISTRICT	B:32
ARTICLE 6: ILLUSTRATIVE PLAN: SOUTH END	B:34
ARTICLE 7: ILLUSTRATIVE PLAN: TRIANGLE	B:36
ARTICLE 8: ILLUSTRATIVE PLAN: EAST VILLAGE	B:38

APPENDIX B. STREET DESIGN MANUAL C:1

ARTICLE 1: PARKLETS	C:2
ARTICLE 2: SIDEWALK CAFES	C:7
ARTICLE 3: NEIGHBORHOOD GATEWAY FEATURES	C:12
ARTICLE 4: EXISTING STREETS	C:14
ARTICLE 5: MIDTOWN STREETScape	C:40

APPENDIX C. HISTORIC DISTRICT GUIDELINES D:1

ARTICLE 1: PURPOSE OF THE HISTORIC DISTRICT DESIGN GUIDELINES	D:2
ARTICLE 2: COMMERCIAL BUILDINGS	D:5
ARTICLE 3: RESIDENTIAL BUILDINGS	D:15
ARTICLE 4: HISTORIC DISTRICT SIGNAGE	D:36
ARTICLE 5: STANDARDS FOR GUIDELINES FOR SUSTAINABILITY	D:45
ARTICLE 6: DEFINITIONS	D:50

APPENDIX D. PLANTING GUIDELINES E:1

ARTICLE 1: PLANTING GUIDELINES	E:2
ARTICLE 2: PREFERRED PLANT LIST	E:7
ARTICLE 3: NOXIOUS AND INVASIVE SPECIES	E:17
ARTICLE 4: DEFINITIONS	E:18

APPENDIX A. DESIGN GUIDELINES

ARTICLE 1: CD-5D & CD-5 DESIGN GUIDELINES.....B:2

DIVISION 1: INTRODUCTION	B:2
DIVISION 2: DESIGN PRINCIPLES	B:2
DIVISION 3: DESIGN CONTEXTS	B:5
DIVISION 4: DESIGN GUIDELINES	B:5

ARTICLE 2: SIGN GUIDELINES.....B:8

DIVISION 1: OVERARCHING SIGN GUIDELINES IN CD-5 AND CD-5D	B:8
DIVISION 2: EXAMPLES OF DESIGN PRINCIPLES APPLIED	B:10

ARTICLE 3: PLANNING AREA AND REGULATING PLAN DESIGN B:16

DIVISION 1: STANDARD GUIDELINES	B:16
DIVISION 2: CREATING PLANS WITHIN INTENSITY ZONES	B:16
DIVISION 3: DESIGNING AT THE SCALE OF THE NEIGHBORHOOD	B:17

ARTICLE 4: ILLUSTRATIVE PLAN: MIDTOWN.....B:28

DIVISION 1: DESCRIPTION	B:28
DIVISION 2: ILLUSTRATIVE PLAN	B:30

ARTICLE 5: ILLUSTRATIVE PLAN: MEDICAL DISTRICT.....B:32

DIVISION 1: AREA DESCRIPTION	B:32
DIVISION 2: ILLUSTRATIVE PLAN	B:32

ARTICLE 6: ILLUSTRATIVE PLAN: SOUTH END.....B:34

DIVISION 1: AREA DESCRIPTION	B:34
DIVISION 2: ILLUSTRATIVE PLAN	B:34

ARTICLE 7: ILLUSTRATIVE PLAN: TRIANGLE..... B:36

DIVISION 1: DESCRIPTION	B:36
DIVISION 2: ILLUSTRATIVE PLAN	B:36

ARTICLE 8: ILLUSTRATIVE PLAN: EAST VILLAGE.....B:38

DIVISION 1: DESCRIPTION	B:38
DIVISION 2: ILLUSTRATIVE PLAN	B:38

ARTICLE 1: CD-5D & CD-5 DESIGN GUIDELINES

DIVISION 1: INTRODUCTION

Section A.1.1.1 Purpose

- A.** The regulations in CD-5 and CD-5D establish the basic requirements for building mass and scale (see Design Context Map). These design guidelines supplement the Character District standards in the following ways:
 1. As advisory information for those who wish to better understand the intent of the design standards in CD-5 and CD-5D.
 2. As part of design review for the administrative approval process.
 3. As part of design review for the alternative compliance process when alternatives are applied for.
- B.** The guidelines within this document focus on allowing for flexibility in design while also protecting the character of the district and enhancing its pedestrian-friendly atmosphere. The guidelines and the review process through which they are administered seek to maintain a cohesive, livable place. Maintaining an attractive pedestrian-oriented environment is a fundamental concept. In addition, the guidelines serve as educational and planning tools for property owners and their design professionals who seek to make improvements.
- C.** The design guidelines also provide a basis for making consistent decisions about the appropriateness of improvement projects requesting alternative strategies through the City's design review process. This includes both administrative review as well as Planning and Zoning Commission and City Council review through the alternative compliance process. The design standards in the Land Development Code and the City's adopted building codes have been codified to meet the intent of the design guidelines. Projects that meet those standards and are not requesting exceptions shall be judged to have met the design guidelines.

DIVISION 2: DESIGN PRINCIPLES

Section A.1.2.1 General Principles applicable to CD-5 and CD-5D

- A. Purpose.** This section sets forth fundamental principles for improvements in the districts. These principles are broad in nature, focusing on qualitative aspects of design. Each improvement project in the districts should help forward the goals outlined in the Introduction and should also comply with these fundamental design principles:
 1. **Design for sustainability.** Aspects of cultural, economic and environmental sustainability that relate to urban design and compatibility should be woven into new developments and improvements.
 2. **Enhance the public realm.** At the heart of the districts is an enhanced public realm, including streets, sidewalks and open spaces. Sidewalks and other pedestrian ways should be designed to invite their use through thoughtful planning and design. Improvement on private property also should enhance the public realm.
 3. **Enhance the pedestrian experience.** Each improvement project should contribute to a pedestrian-friendly environment. This includes defining street edges with buildings and spaces that are visually interesting and attract pedestrian activity. Buildings that convey a sense of human scale and streetscapes that invite walking are keys to successful design in the districts. Providing sidewalks of sufficient width for circulation and outdoor activities, and installing appropriate landscape and streetscape elements are also important.

Section A.1.2.2 Principles Specific to Downtown CD-5D

1. Honor the heritage of the City. Buildings, sites and components of urban infrastructure that have historic significance should be preserved and considered as design inspiration for new work in the district. This does not mean copying earlier styles, but rather learning from them. New work around these resources should be compatible with them.
2. Celebrate the Courthouse Square. As the major focal point of the district, Courthouse Square should be valued in all urban design. This applies to properties in close proximity

to the square, but also relates to improvements that may link other places to it, in terms of views, pedestrian circulation and building orientation.

3. Design to fit with the context. Improvement projects should consider their context. In some areas, that context remains strongly anchored by historic buildings. In other parts of the district, the context is more contemporary, with individual historic buildings sometimes appearing as accents. In still other areas, no historic structures exist. In this respect, “designing in context” means helping to achieve the long term goals for each of these areas.
4. Promote creativity. Innovation in design is welcomed in downtown. Exploring new ways of designing buildings and spaces is appropriate when they contribute to a cohesive urban fabric. This type of creativity should be distinguished from simply being “different.”
5. Design with authenticity. The district is defined by buildings and places that reflect their own time, including distinct construction techniques as well as style. The result is a sense of authenticity in building and materials. All new improvements should convey this sense of authenticity.
6. Design with consistency. Buildings and places in the district that are highly valued are those which have a cohesive quality in their use of materials, organization of functions and overall design concept. Each new project should also embody a single, consistent design concept.
7. Design with durability. The district’s cherished buildings and spaces are designed for the long term with durable materials. New work should have this same quality.

DOWNTOWN AND MIDTOWN DESIGN CONTEXTS MAP



DIVISION 3: DESIGN CONTEXTS

Section A.1.3.1 Description of Context Areas

- A. Purpose.** This section includes goal statements for each of the design contexts within CD-5D as well as the Midtown Entertainment District in CD-5. These contexts are areas identified by community workshop participants as having unique character, constraints and/or design goals. Please note the Courthouse Square area is not included, as a separate design review system is in place for the historic district. See the maps on the previous page for the location of the design contexts.
- 1. University Edge.** The University Edge context should create a safe, pedestrian-friendly transition between campus and CD-5D. New campus development in this context should be compatible in scale and respectful of the district's design traditions. In addition, within the University Edge there are key public views up to campus and down to the Courthouse Square. New development should preserve and enhance these views.
 - 2. Downtown.** Within the Downtown context it is especially important to maintain compatibility with the Courthouse Square. Increased density is appropriate where it does not impact the character of the square.
 - 3. Residential/Transition Edge.** For new development within the Residential/Transition Edge context it is important to minimize impacts from higher scale development on the character of the adjacent residential neighborhoods. New development should provide a transition in scale between the taller buildings in CD-5D and the existing residential neighborhoods.
 - 4. Transit Oriented Development.** Projects within the Transit Oriented Development context should establish a strong pedestrian orientation. The street front character is especially important here to encourage pedestrian activity.
 - 5. Approach.** The Approach context is the corridor between the highway and Downtown, providing an entry procession into the heart of Downtown. New development in this area should provide visual interest and not overwhelm the distinct character of the district.

- 6. Midtown Entertainment District.** The Midtown Entertainment District is defined as the area west of IH-35 within CD-5, Midtown on the Comprehensive Plan. New development in this area should enhance the public realm and the pedestrian experience by defining street edges with buildings and spaces that are visually interesting and attract pedestrian activity. Providing sidewalks of sufficient width for circulation, and outdoor activities, and installing appropriate landscape and streetscape elements is important. This area is a complement to the Downtown CD-5D and is an appropriate location for density and student housing, as well as associated entertainment, restaurant, and retail services.

DIVISION 4: DESIGN GUIDELINES

Section A.1.4.1 Building Height

- A.** The variety in building heights that exist helps to define the character of the area. New development should continue the tradition of height variation, expressing and supporting human scale and architectural diversity in the area. New buildings above three stories should set back upper floors to maintain a sense of human scale at the street and minimize impacts to lower scale historic structures in the district. The following table should be used when analyzing requests for additional height.

Section A.1.4.2 Height Strategy by Context

DESIGN CONTEXT	GOAL(S)	ADDITIONAL HEIGHT IN FIRST AND SECOND LAYER	ADDITIONAL HEIGHT IN THIRD LAYER
UNIVERSITY EDGE	Preserve key public views up the hill to campus.	Alternatives which maintain sufficient public access to key views up the hill may be considered.	Alternatives may be considered where taller structures will provide greater residential opportunities within proximity to campus and key views are sufficiently maintained.
DOWNTOWN	Maintain compatibility with Courthouse Square.	Flexibility for building height requirements may be considered where it will not be visible from the square. Overall mass should maintain a sense of human scale and not appear out of character with the Downtown Historic District.	No additional height adjacent to Downtown Historic District. Additional height may be considered where it will not obscure key views.
RESIDENTIAL/ TRANSITION EDGE	Minimize impacts from higher scale development on the character of adjacent residential neighborhoods. Provide a transition in scale between the T5 zone and the neighborhoods.	No additional height.	Additional height should only be permitted if it is not visible from the public right of way or the adjacent residential neighborhoods.
TRANSIT ORIENTED DEVELOPMENT	An increased density at and surrounding the future rail stop is desired.	Additional height at the street wall may be appropriate where the building maintains a sense of human scale and a pedestrian-friendly streetscape.	Additional height may be appropriate here where the building maintains a sense of human scale and maintains a pedestrian-friendly streetscape.
APPROACH	The intent for the approach area is to provide corridors between the highway and Downtown.	The intent for the approach area is to provide corridors between the highway and downtown.	Additional height may be appropriate where it does not directly impact residential neighborhoods. The building should maintain a sense of human scale and a pedestrian-friendly streetscape.
MIDTOWN ENTERTAINMENT DISTRICT	Promote high-density mixed use development to complement Downtown.	Additional height may be appropriate where the building maintains a sense of human scale and pedestrian-friendly streetscape.	Alternatives may be considered where taller structures will provide greater residential opportunities within proximity to campus and key views are sufficiently maintained and alternative forms of transportation connections to campus have been accommodated.

Section A.1.4.3 Varied Upper Floor Massing Requirement.

- A. Specific to CD-5D.** Buildings in CD-5D are typically three stories or less in height. In most cases a range of building heights occur across a single block face. As the desired density increase is incorporated, it is important that new, taller structures not dominate the street front. Taller buildings should vary upper floor massing to provide variety in building height as perceived from the street and to maintain a sense of pedestrian scale at the sidewalk. If an alternative to the varied upper floor massing requirements is requested, the building shall exceed

the minimum requirements of the blank wall area outlined in section 4.3.5.3 of the Land Development Code by adding additional Expression Tools and Building Elements.

Section A.1.4.4 Building Mass and Articulation.

- A. Specific to CD-5D.** Traditional development patterns create a rhythm along the street by the repetition of similar building widths and vertical proportions. Variations in massing and building articulation should be expressed throughout a new structure, resulting in a composition of building modules that relate to the scale of traditional buildings.

1. Provide horizontal expression at lower floor heights to establish a sense of scale.
2. Provide vertical articulation in a larger building mass to establish a sense of scale.
3. Maintain established development patterns created by the repetition of similar building widths along the street.

Section A.1.4.5 Canopies and Awnings.

- A. Specific to CD-5D.** Canopies and awnings are noteworthy features on many buildings in the CD-5D, and their continued use is encouraged. Traditionally, these features were simple in detail, and reflected the character of the building to which they were attached. An awning or canopy should be in character with the building and streetscape.
- B. General to All.** The use of canopies and awnings is encouraged to provide shade on the sidewalk when shade trees are not utilized. When awnings and canopies are placed near trees, the tree habit and mature canopy size shall be taken into consideration to ensure canopies and awnings do not inhibit the tree's growth.

Section A.1.4.6 Window Design.

- A. Specific to CD-5D.** The manner in which windows are used to articulate a building wall is an important consideration in establishing a sense of scale and visual continuity. In traditional commercial buildings, a storefront system was installed on the ground floor and upper story windows most often appeared as punched openings. Window design and placement should help to establish a sense of scale and provide pedestrian interest.
1. Provide a high level of ground floor transparency on a building in an area traditionally defined by commercial storefronts.
 2. The use of a contemporary storefront design is encouraged in commercial settings.
 3. Arrange windows to reflect the traditional rhythm and general alignment of windows in the area.

Section A.1.4.7 Building Scale

- A.** A new building within CD-5D and CD-5 should convey a sense of human scale through its design features.

Section A.1.4.8 Views

- A.** Views within CD-5D from the public right of way to the University and Courthouse Square are important and should be retained. The location of the building on a site, in addition to its scale, height, and massing, can impact views from the adjacent public right of way, including streets, sidewalks, intersections, and public spaces.
1. Minimize the impacts to primary views from the public right of way to the University and Courthouse Square.

Section A.1.4.9 Neighborhood Transitions

- A.** Provide a compatible sense of scale along sensitive edges by using lower building heights for areas of a property adjacent to a sensitive site, conventional residential district, ND-3 or ND-3.5, or historic district.

Section A.1.4.10 Expression Tools

- A.** Traditionally, buildings in CD-5D have an established sense of scale and proportion and express a visual rhythm and pedestrian interest at the street front. This should be continued in new projects in both CD-5 and CD-5D. Vertical and horizontal articulation should meet the intent of the blank wall area standards and express a sense of human scale and provide visual interest on a principal frontage.
1. **Vertical Expression.** Vertical articulation techniques should provide interest in design and human scale. The purpose of these articulations is to ensure that the front of a new structure has a variety of offsets, surface relief, and insets to reflect a more traditional rhythm and scale at the street front.
 2. **Horizontal Articulation.** The objective of horizontal articulation tools is to create a sense of human scale, facade depth and visual interest on a building facade.

ARTICLE 2: SIGN GUIDELINES

DIVISION 1: OVERARCHING SIGN GUIDELINES IN CD-5 AND CD-5D

Section A.2.1.1 Purpose

This section provides general design guidelines for signs. Balancing the functional requirements for signs with the objectives for the overall character of the area is a key sign design consideration. A sign is seen as serving two functions: first, to attract attention; and second, to convey information, essentially identifying the business or services offered. Orderly sign location and design should be applied to make fewer and smaller signs more effective. If a sign is mounted on a building with a well-designed facade, the building front alone can serve much of the attention-getting function. The sign can then focus on conveying information in a well-conceived manner. Similarly, for a free-standing sign, landscaping and other site amenities can help to give identity to the businesses located on the site. In this respect, each sign should be considered with the overall composition of the building and the site in mind. Signs should be in scale with their structure and integrated with surrounding buildings.

- A. Consider a sign in the context of the overall building and site design.
- B. Design a sign to be in scale with its setting.
- C. Design a sign to highlight architectural features of the building.
- D. Design a sign to convey visual interest to pedestrians.
- E. Avoid damaging or obscuring architectural details or features when installing signs on historic structures.

Section A.2.1.2 Guidelines

This section provides specific sign guidelines on topics directly related to the sign standards.

- A. **Historic Signs in CD-5D.** Historic signs within CD-5D contribute to the character of downtown. They also have individual value, apart from the buildings to which they are attached. Historic signs of all types should be retained and restored whenever possible. This is especially important when they are a significant part of a building's history or design.

1. Consider history, context and design when determining whether to retain a historic sign.

- B. **Sign Character in CD-5 and CD-5D.** A sign should be in character with the materials, colors and details of the building and its site. The integration of an attached sign with the building or building facade is important and should be a key factor in its design and installation. Signs also should be visually interesting and clearly legible. Signs that appear to be custom-designed and fabricated, and that convey visual interest in the urban setting are preferred. Those that are scaled to the pedestrian are especially encouraged. A sign should also reflect the overall context of the building and surrounding area.

1. A sign should be subordinate to the overall building composition.
2. Use sign materials that are compatible with the architectural character and materials of the building.
3. A sign should not obscure character-defining features of a building.

C. Sign Illumination in CD-5D

1. Illumination should occur in a manner that keeps it subordinate to the overall building and its site as well as the neighborhood, while accomplishing the functional needs of the business. Minimize surface glare and manage light spill such that glare is not created on adjoining properties.
2. Where allowed, an external light source should be shielded to direct the light and minimize glare.
3. External Illumination, Tube Lighting, Halo Lighting, and Direct Illumination shall be designed to be in character with, and subordinate to the building facade.

Section A.2.1.3 Specific Sign Types

- A. **Awning or Canopy Sign.** An awning or canopy sign may be placed on either the vertical valance flap, the top, the sloped portion, or on a side panel of the awning or canopy.
1. Use an awning or canopy sign in areas with high pedestrian use.

2. Use an awning or canopy sign when other sign types would obscure architectural details.
- B. Projecting Sign.** A projecting sign is attached perpendicular to the wall of a building or structure.
1. Design a bracket for a projecting sign to complement the sign composition.
 2. Locate a projecting sign to relate to the building facade and entries.
- C. Sandwich Board Sign.** A sandwich board is a portable sign designed in an A-frame or other fashion, and having back-to-back sign faces.
1. Locate a sandwich board to maintain a clear circulation path on the sidewalk. A minimum of 4 feet in clearance is required.
 2. Design the sandwich board to be durable and have a stable base.
- D. Wall Sign.** A wall sign is a sign that is attached flat against the facade of the building consisting of individual cut letters applied directly to the building, or painted directly on the surface of the building.
1. Place a wall sign to be flat against the building facade.
 2. Place wall signs to integrate with and not obscure building details and elements.
- E. Directory Sign.** A tenant panel or directory sign displays the tenant name and location for a building containing multiple tenants.
1. Use a directory sign to consolidate small individual signs on a larger building.
 2. Locate a directory sign at the street level entrance to upper floor businesses or on facades facing entrances to alleys, rear lanes and parking lots for business way finding purposes.
- F. Pole and Monument Signs.** A monument sign is a sign that is erected on a solid base placed directly on the ground and constructed of a solid material. A pole mounted sign is generally mounted on one or two simple poles.
1. A pole or monument sign may be considered where it has been used traditionally and the building or activity is set back from the street or public right-of-way.
 2. A pole or monument sign may be considered on a historic property or within a historic district when it is demonstrated that no other option is appropriate.
 3. Design a pole or monument sign to be in character and proportionate with its structure and site.
 4. Design a monument sign to incorporate a sturdy supporting base that is at least 75% of the width of the sign face at its widest point. Appropriate base materials include, but are not limited to brick, stone, masonry and concrete.

DIVISION 2: EXAMPLES OF DESIGN PRINCIPLES APPLIED

The following photographs provide examples of improvements that illustrate how some of the design guidelines may apply in CD-5D and CD-5. Some specific design features are identified in the captions. Note that, in some cases, while a specific design feature is described as being an appropriate example, the overall building shown may not meet all of the city's other design standards and guidelines.



Vertical Expression Lines; Cornice; Balcony



Varied Upper Floor Massing; Wall Offset



Wall Offset; Horizontal Expression Line



Wall Notch; Horizontal Expression Line



Vertical Expression Lines; Awning / Canopy



Wall Offset; Horizontal Expression Line; Materials Change



Varied Upper Floor Massing; Change in Materials



Varied Upper Floor Massing; Change in Materials; Balcony



Wall Notch



Change in Materials; Cornice; Stoop



Wall Offset; Cornice



Awning / Canopies, Cornice; Balcony



Step down in height adjacent to historic building



Wall Notch; Change in Materials



Varied Upper Floor Massing; Canopy / Awning



Canopy / Awning; Moldings; Vertical Proportions



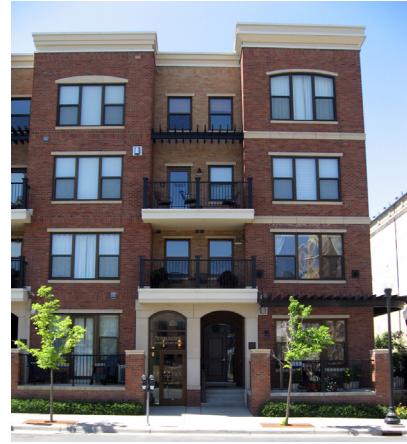
Wall Offset; Vertical Window Proportions



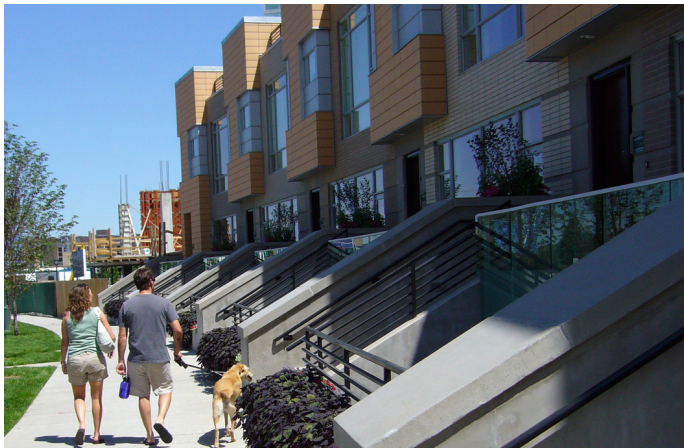
Varied Upper Floor Massing; Wall Notch; Cornice



Window design includes a frame and vertical proportions; Cornice



Wall Notch; Change in Materials; Cornice; Window Design includes vertical proportions (in sets of 3)



Wall Offsets; Stoop



Window Design includes sills, true divided lights, and window insets



Window design includes vertical proportions (in pairs) and true divided lights



Wall Notch; Awning / Canopy; Window moldings at second floor; Cornice



Awning / Canopy; Window Design includes sills and vertical proportions



Change in Materials (at first floor); Cornice; Window design includes vertical proportions



Vertical Expression Line (pilasters or attached columns); Cornice; Change in Material (first and upper floors)



Cornice; Change in Materials (upper floor); Window Design includes insets, sills, and true divided lights



Varied parapet line; Change in Materials, Vertical Expression Line (pilasters)



Cornice; Window Design includes sills and insets



Cornice; Second Floor Expression Line



Wall Notches; Change in Materials (first floor); Cornice



Varied Upper Floor Massing; Wall Offset; Cornice



Varied Upper Floor Heights; Wall Offsets; Cornice



Awning / Canopy



Wall Notches; Change in Materials (vertical and horizontal); Cornice

ARTICLE 3: PLANNING AREA AND REGULATING PLAN DESIGN

DIVISION 1: STANDARD GUIDELINES

Section A.3.1.1 Comprehensive Plan

- A. The Preferred Scenario developed during the Comprehensive Plan process identifies:
 1. Open Space;
 2. Low Intensity;
 3. Existing Neighborhood;
 4. Medium or High Intensity Zones;
 5. Employment Areas; and
 6. Land Use Corridors
- B. During the Code Rodeo for the development of Code SMTX, several of the main Intensity Zones had illustrative plans created to demonstrate how development within each area could be accommodated.
- C. The Intensity Zones with illustrative plans include Midtown, the Triangle, South End, the Medical District, and the East Village. Illustrative plans represent preferred and compliant development, however development within the Intensity Zones may be modified.
- D. These standard design guidelines layout the process for developing new site plans within the Intensity Zones. The pre-approved plans are included at the end of this section.

DIVISION 2: CREATING PLANS WITHIN INTENSITY ZONES

Section A.3.2.1 Identify Property

- A. Intensity Zones are large areas that have been identified to accommodate future growth. They typically have multiple property owners, a variety of existing land uses, and a mix of previously developed and undeveloped areas. Each individual property owner can develop their land in accordance to the Land Development Code. These guidelines help to explain

design principles and design standards that are intended for development within the Intensity Zones.

- B. Once a property owner has determined their land is within an Intensity Zone they can decide to either utilize the illustrative plan or develop a new plan. All plans shall be developed in accordance with the following guidelines and principles.

Section A.3.2.2 Identify Primary and Secondary Street Connections

- A. When developing new plans, one must look at how the property fits within the larger picture of natural systems and development in San Marcos by reviewing the Transportation Master Plan. The Transportation Master Plan identifies the general location for Primary and Secondary street connections that must be made throughout San Marcos and within the Intensity Zones. The Primary and Secondary Street Network will begin to subdivide the Intensity Zones.

Section A.3.2.3 Identify Green Space Linkages

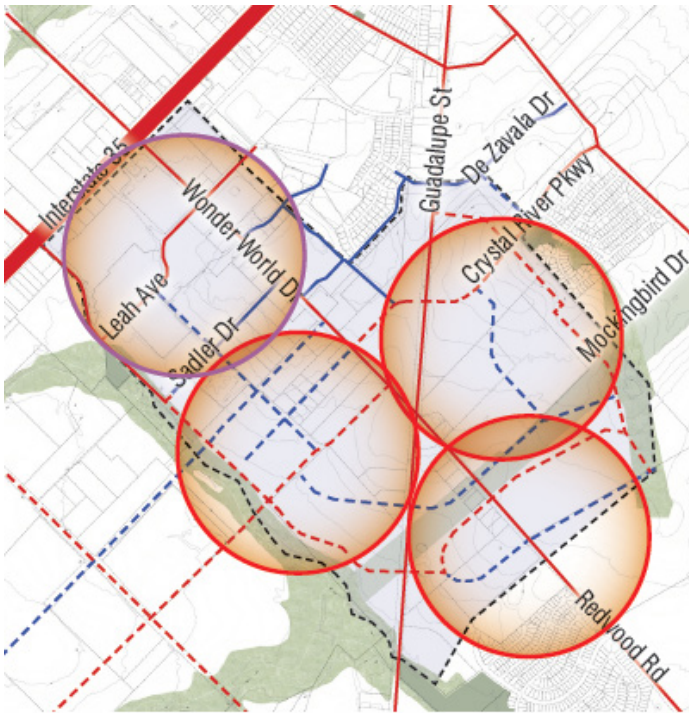
- A. In addition to primary and secondary street connections, San Marcos has an active commitment to greenways and greenway connections. Greenways and greenway connections can be identified on the Greenways Master Plan. Although Greenways have typically already been identified and tend to create edges to existing development areas and the Intensity Zones, Greenway connections may run through an Intensity Zone. These Greenway Connections should be used as organizing elements along with the street connections, within the Intensity Zone.

Section A.3.2.4 Identify Pedestrian Sheds

- A. The traditional neighborhood is the basic increment for town planning. Neighborhoods are the building blocks for which enduring settlements are formed. A genuine neighborhood is compact, pedestrian-friendly, and has a mix of uses.
- B. For the purpose of these design guidelines and development within San Marcos, a typical neighborhood is measured by the

distance people will walk if the streets are safe, comfortable, and interesting. People will typically walk approximately $\frac{1}{4}$ mile (1,320 feet) or 5 minutes before turning back or opting to drive or ride a bike instead.

- C. Of course, neighborhoods are not circular in design, nor is that desirable. Neighborhoods tend to elongate along contours and ridges and compress at slopes because the walkability elongates across flat plains. The $\frac{1}{4}$ mile radius, from the center to the edge or $\frac{1}{2}$ mile (2,640 feet) from one edge of the neighborhood to the other is a benchmark for creating a neighborhood unit that is manageable in size and feel and is inherently walkable.
- D. Neighborhoods of many shapes and sizes can satisfy the $\frac{1}{4}$ mile test. Large civic spaces such as modern schools with play fields require a great deal of acreage and can be situated where they are shared by more than one neighborhood.
- E. Natural features, thoroughfares, and Greenway connections should be used to identify the boundaries between neighborhoods. There is no perfectly round neighborhood, so actual distances within different neighborhoods will vary.



PEDESTRIAN SHED EXAMPLE

DIVISION 3: DESIGNING AT THE SCALE OF THE NEIGHBORHOOD

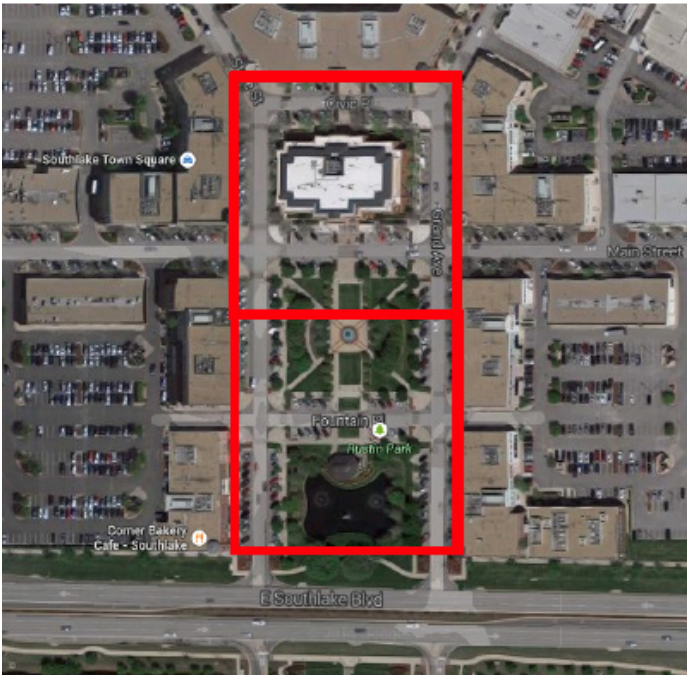
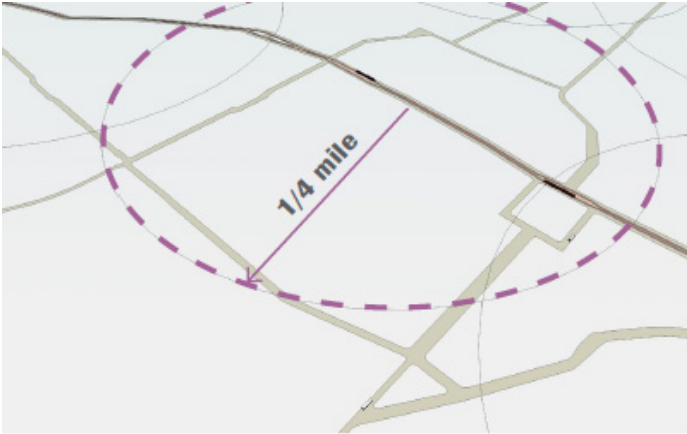
There is no single test for neighborhood quality; neighborhoods of strong character are created through a variety of techniques. The most successful neighborhoods generally exhibit design conventions that are absent in conventional sprawl. These include: a legible center and edge to the neighborhood, an integrated network of walkable streets, an overall size to the neighborhood suitable for walking, buildings set close enough to the streets to spatially define the streets as public spaces, and opportunities for shopping and workplaces close to home.

Developing and redeveloping settlements based upon a model of traditional neighborhood design principles is the first step towards great neighborhoods. These design standards and conventions have withstood the test of time. These ideas help create livability, a sense of community, and ultimately community character.

Section A.3.3.1 Identifiable Center and Edge

- A. One should be able to tell when one has arrived in the neighborhood and when one has reached its heart. Each neighborhood should have its own identifiable center and edge.
- B. The overall location of streets, along with greenway networks has helped identify the general edges of neighborhoods although they can be adjusted as necessary. The neighborhood, or pedestrian shed, should be used as an organizational tool that is refined when this scale of design is worked out.
- C. Discernible centers are perhaps even more important than discernible edges because of the center's usefulness in day-to-day life. There must be places where people feel welcome and encouraged to congregate, recognizable as the heart of the neighborhood.
- D. A proper center has at least one outdoor public environment for this purpose, designed with pedestrians in mind; this is spatially the most well defined "outdoor room" in the neighborhood. The size and formality of the central space vary from place to place. While it is most typically a park, square, or plaza, it is also possible to give shape to the neighborhood center with just a special "four corners" intersection of important streets.
- E. The best centers are within walking distance of the surrounding, primarily residential areas, and typically some

gradient in density is discernible from the center to the edge. Centers typically possess a mix of uses and the potential for higher-density buildings at a pedestrian scale but could also simply have a mix of residential building types with the most urban represented at the center.



Southlake Town Center in Dallas features a small, well-defined, square which is framed by mixed-use buildings. This space has a 1:2 ratio.

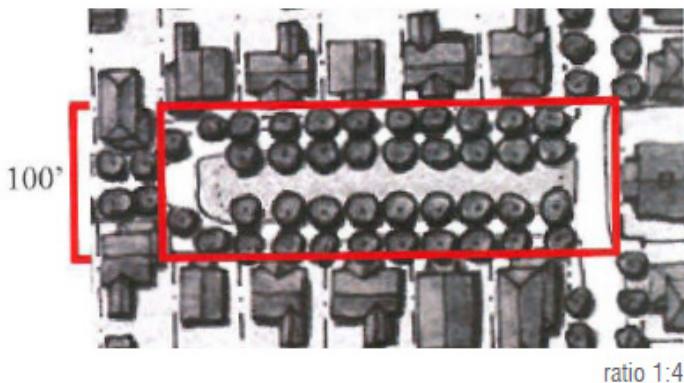
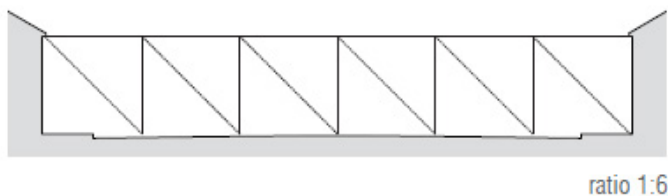
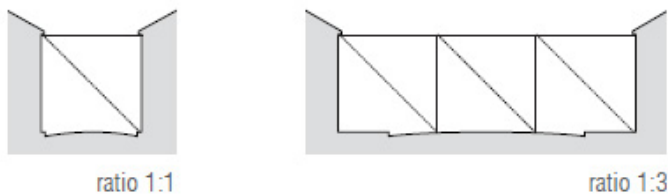
Section A.3.3.2 Create Walkable Block Sizes

- A. A network of streets allows pedestrians, cyclists, and motorist to move safely and comfortably through a neighborhood. The maximum average block perimeter to achieve an integrated network is 1,500 feet with a maximum uninterrupted block face of ideally 450 feet with streets at intervals of no more than 600 feet apart along any one single stretch.
- B. A “street network” is a connected web of streets, not necessarily a strict Cartesian grid. The street network forms blocks that set up logical sites for private development, and it provides multiple routes for walking, biking, and driving. Small block size and frequent intersections are necessary. When designing streets, we should strive to make them walkable first, and then add provisions for cars, trucks, and emergency vehicles.
- C. “Design Speed” is the crucial number engineers officially use to configure streets for orderly traffic movement. The chosen design speed must be a low figure, usually less than 25 mph, for a walkable environment. The slow design speed that characterizes walkable streets results in the conscious choice of features such as narrow curb-to-curb dimensions, street trees, architecture close to the street edge, on-street parking, and relatively tight turning radii.
- D. The highest quotient of walkability will result when buildings that shape the street space are set close enough to the front property line to spatially define the streets as public spaces, with a minimum degree of enclosure formed by a building-height-to-street-width ratio.



Section A.3.3.3 Creating an “Outdoor Room” Proportions or Building Height to Public Space

- A.** A primary task of all architecture and landscape design is the physical definition of public spaces as places of shared use. The ratio of building heights-to-the width of space between the buildings is critical to creating a sense of spatial enclosure outdoors.
- B.** The eye must perceive more street wall than open sky to sense an outdoor room. The ratio of 1 increment of height to 6 increments of width (1:6) is the absolute minimum. The ratio of 1:3 is ideal. The tighter the ratio, the stronger the sense of place and the higher the real estate value along shopping streets in particular. In the absence of spatial definition from a street wall, street tree plantings can have a similar effect.
- C.** In the example below, a ratio of 1:4 is created across the 100 foot width of streets and green. This requires homes of a standard two stories or 25 feet from the ground to the eave coupled with shallow front setbacks.



Section A.3.3.4 Designate Multiple Different Intensities of Use

- A.** Neighborhoods have different areas: Center, General, and Edge. These names do not refer to a single use. Instead they dictate a range of uses, building types and intensities of development allowing for a wide range of flexibility. The center of a neighborhood is usually developed in a mixed-use manner with more intense uses than the general and edge area. This delicate gradient from center to edge provides visual variety as well as a variety of housing and commercial options. These correlate to the various Character Districts:
 1. Edge - CD-2, CD-3
 2. General - CD-4
 3. Center - CD-5, CD-5D
- B.** These Character Districts are based on the Rural-to-Urban Transect which is a tool that classifies human habitats in a range from the most natural to the most urban. The Transect is an important tool because it acknowledges the diverse characteristics of villages, towns, and cities, and encourages new development in a predictable manner to respect its context within the plan and reinforces the intended quality of the place.
- C.** There are six main Transect Zones commonly used in the planning profession today, ranging from the highest mix of uses and residential density (T6, the Urban Core Zone) to the lowest (T1, the Natural Zone). Sub-zones may be utilized to add an additional level of precision when calibrating the code for a particular site.
- D.** The standard Transect Zones have been adjusted and calibrated to match the existing and desired characteristics of development in San Marcos and are referred to as Character Districts within the Land Development Code. There are a total of six Character Districts for development in San Marcos.
- E.** Each Character District is defined by particular characteristics that correspond with the density and intensity of land use and urbanism. These characteristics include building placement, landscaping, and curb details, all of which influence the level of walkability and vibrancy in a particular place.

- F.** A mix of Character Districts should be found within each neighborhood, however, not all Character Districts will be found in each neighborhood or Intensity Zone.
- G.** The CD-5 does not necessarily have to occur at the geometric center of a neighborhood. In many instances, the ideal retail location will occur at the convergence of two neighborhoods, on their periphery. In this case, the geometric center of a neighborhood can be occupied by a less intense set of uses, perhaps a corner store, or civic use.
- H.** The Character Districts for San Marcos include:
- 1. CD-1 (Natural).** Consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.
 - 2. CD-2 (Rural).** Consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland and hill country. Typical buildings are farmhouses, agricultural buildings, cabins and villas.
 - 3. CD-3 (Sub-Urban).** Consists of low density walkable residential areas, and has the least activity. Buildings are detached and are typically one or two stories with some three story buildings. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and thoroughfares irregular to accommodate natural conditions, but designed for slow movement.
 - 4. CD-4 (General Urban).** Consists of a mixed use but primarily residential urban fabric. It may have a wide range of attached and detached building types including single

CD-1



CD-2



CD-3



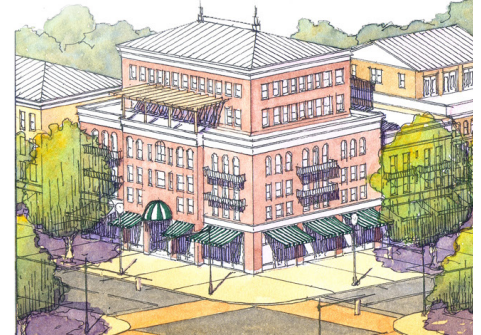
CD-4



CD-4D

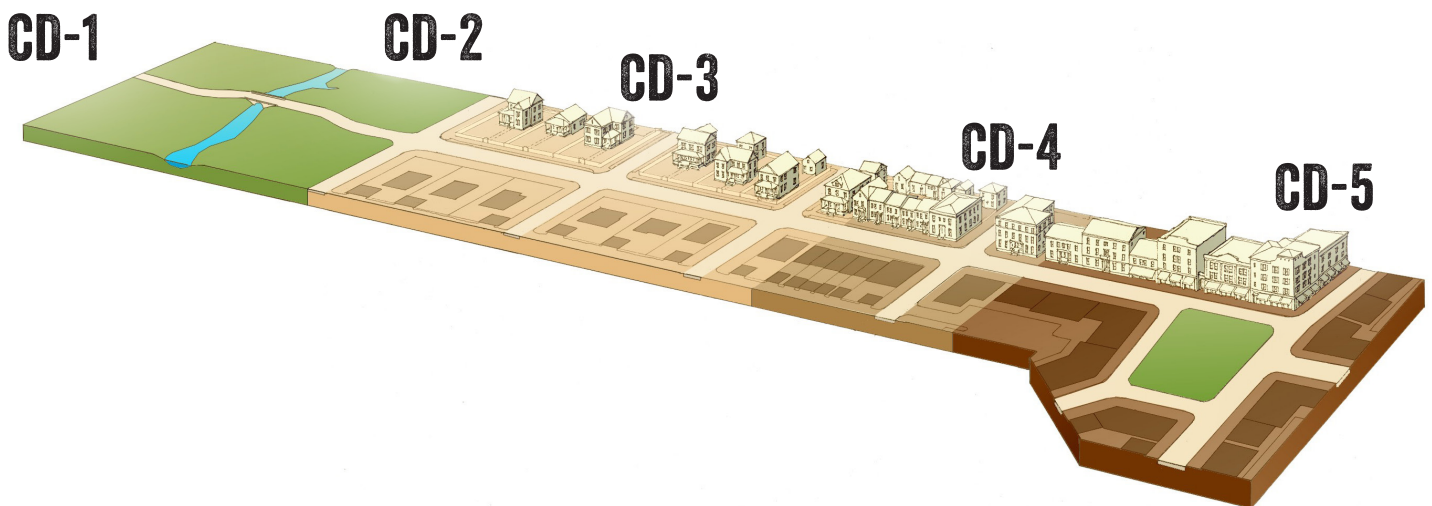


CD-5



family, duplex, rowhouses, small multi-family, live/work, and small commercial. Buildings are typically two to three stories. Setbacks are shallow to medium and landscaping is variable. Streets with curbs and sidewalks define medium sized blocks.

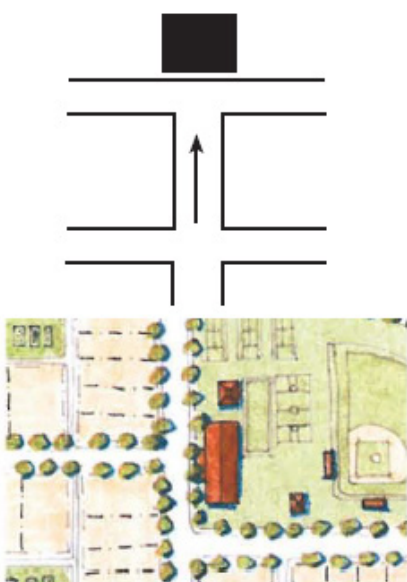
5. **CD-5 (Urban Center).** Consists of higher density mixed use buildings that accommodate the widest range of uses including retail, offices, rowhouses, apartments, day cares, post offices, libraries, small neighborhood retail, live-work spaces, and places of worship. Buildings are predominantly attached and typically range from two to five stories. It has a tight network of streets, with wide sidewalks, regularly spaced street tree planting and buildings set close to the sidewalks.
6. **CD-5D (Urban Center Downtown).** CD-5D is similar in character to CD-5 except that it is found within the Downtown. This district consists of infill development area where block structure, thoroughfares and civic spaces have been established. Some metrics vary from CD-5 such as lot occupation and principal building heights.



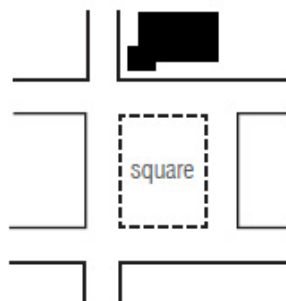
Section A.3.3.5 Special Sites for Civic Purposes

- A.** In complete neighborhoods, it is always true that some of the best real estate is set aside for community purposes. These locations are made significant by the geometry of the street network or natural geographic features of the land.
- B.** Prominent locations, such as terminated vistas seen down a street or at the top of a hill, should be reserved for landmark buildings. These locations are deliberately selected for building sites that will conclude the long view or anchor a prominent street corner or neighborhood square. These special sites may be located at the center of the neighborhood or elsewhere within the neighborhood. However, civic buildings, because they serve the entire community, should be accessible and located in areas with greater activity.
- C.** Approaches include locating public buildings at the ends of streets, across greens, or at the center of greens. Public buildings can be relatively small if placed strategically in the

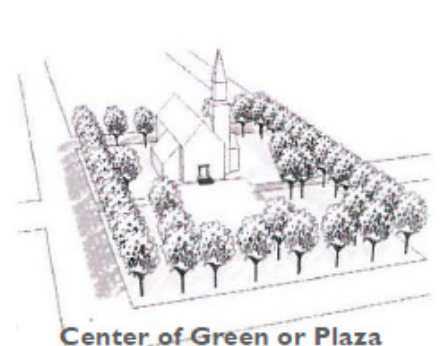
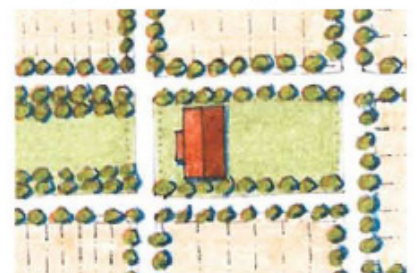
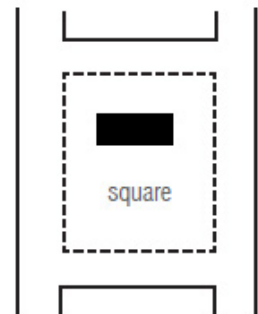
public view. Sites for civic purposes should be reserved even before there is a need for them to be constructed. The uses of these buildings may change over time as the needs of the community and neighborhood evolve.



Terminated Vista



Across a Green or Plaza



Center of Green or Plaza

D. Similarly, special sites should be set aside for parks, greens, squares, and plazas. Each neighborhood should have one special gathering space at its center, such as a central green.

E. General locations and sizes of public spaces for community use and enjoyment can vary and should not be limited to a specific minimum size. The size and shape of open space varies based on its position in the neighborhood and the intended function of that space.

F. **Open Space.** Open Space contains natural preserves, paths, and trails. Open Space is a natural preserve that serves environmental goals such as the preservation of habitat or infiltration of water. It may also be available for unstructured recreation. The shape of a park is independent from surrounding building frontages and tends to follow the boundaries of natural features. Open Space contains trails, bodies of water, woodlands and meadows.

G. **Neighborhood Park.** Neighborhood parks are smaller than open space but should ideally be large enough for a person to be away from the noise and movement of the street. A neighborhood park is available for structured or unstructured recreation. A neighborhood park may be spatially defined by landscaping. Trees can be formally or naturalistically planted. A neighborhood park contains lawns, trees, pavilions, memorials, benches and playground equipment.

H. **Pocket Park.** Pocket parks are often used for civic purposes. A pocket park is clearly defined by building frontages and can provide a public open space that provides a setting for civic buildings. Pocket parks are located at the intersection of important streets. Pocket parks may contain lawns, trees and pavilions that are formally disposed. A pocket park is available for structured or unstructured recreation and civic purposes.

I. **Plaza.** Plazas are designed for civic and commercial activities. A plaza is clearly defined by building frontages. Its surface is typically covered with pavers or compact earth. Trees are optional and plazas are located at the most central intersections.

OPEN SPACE



NEIGHBORHOOD PARK



POCKET PARK



PLAZA



Section A.3.3.6 Provide a mix of Land Uses, Building Types and Housing Options

- A.** Great neighborhoods have a fine grained mix of land uses and housing types. Any mix of uses dramatically reduces the number of external automobile trips required by residents. At least three dwelling types are necessary to create architectural diversity.
- B.** Houses in San Marcos should not be just one type; there should be a range of housing types that occur on a variety of lot sizes. A variety of building types allows for a diversity of family sizes, ages, and income levels to live in the same neighborhood. San Marcos should be a place for everyone, and should support a diverse population. This mix of incomes is essential for securing a socially and economically balanced community.
- C.** Once neighborhoods have had a block structure established, street network, and civic spaces, the final scale of development plans occurs when the detailed mix of unit types is lotted out and platted. Much of the mix of land uses occurs based on the
- transect but can be more specifically addressed once lotting, building placement, and orientation are determined.
- D.** The fronts of buildings should have doors and windows facing the street, or occasionally, a pedestrian walkway, a waterbody, or a civic space. Front setback ranges determine where buildings are constructed, thus defining the street “wall”. This wall makes the street feel like a public room.
- E.** Denser building types, such as multifamily buildings, rowhouses, and mixed use buildings could be located toward the centers of neighborhoods or activity nodes. Small houses and larger single-family homes could be located further from the center of the neighborhood.





Civic



Multi-family



Mixed-use



Small houses



Live-work



Large houses



Rowhouses



Garage apartments

Section A.3.3.7 Midtown Gradual Transitions Example

- A. Existing Conditions.** The aerial view to the right shows how each property has been developed over time yielding a typical suburban pattern. Each has its own curb cut or driveway from Thorpe Lane (running diagonally across the image) to its own parking lot. In most cases the parking lots don't connect and are separated by fences or curbs. With the shift in zoning regulations for this area from a low intensity to a high intensity, a new pattern is required. Pedestrian and bicycle access needs improvement in order to get more intense development while reducing parking demands. As it is now, a pedestrian can't park once, at a bank for example, and then walk to a store nearby for a purchase. Similarly a resident within one of the apartments does not have an easy and comfortable walk to any of the banks on the street.
- B. Step 1.** The starting point to revitalize the western portion of Midtown is with Thorpe Lane since it is the central spine that links almost all of the properties. The entire cross section of the street should be redeveloped in a way to reduce traffic speeds with narrower travel lanes, plant street trees to establish a canopy of shade for the warmer months, and add sidewalks that are wide and continuous along the entire length of the street. Bike lanes, sharrows, or dedicated bike lanes within an expanded sidewalk should be part of the design. Zoning changes that direct new development to create streets and buildings that are oriented to those streets will start the process of building a network of streets that currently don't exist. The illustration shows a site empty today as the first project, but it could just as well be a different property.
- C. Step 2.** Then, as more properties are redeveloped over time, more streets and pedestrian connections are provided to the new residents and business patrons in the neighborhood. The transformation will not occur all at once. This will likely be a slow process at first, but will speed up after the first one or two projects are realized. Since the properties vary in size, the size of the redevelopment projects will vary accordingly. With the increase in residents, commercial businesses become more viable on the ground floors of the buildings that front Thorpe Lane, transforming the street into the main street for the neighborhoods along it. It will be easier for pedestrians to walk among buildings, taking advantage of the shortest distances between their destinations. Parking will still be needed, but perhaps the demand will be reduced by the increased pedestrian access.



D. Step 3. With even more time, the neighborhood is getting more complete. Thorpe Lane will function better as the neighborhood center as more buildings begin to shape both sides of the street. Not all properties will change. Some businesses and apartment buildings will remain. As the new network of streets connect, the new east-west connections will take some of the traffic pressure off of Thorpe Lane. With the proximity to Texas State University, it will be a place attractive to students and faculty who prefer to walk and bike and use transit, whether they own a car or not. Many businesses will also be supported by the spill-over effect of various sporting events that take place on campus just to the western edge of Midtown.



E. Future Prospects. Midtown eventually becomes a complete neighborhood. Thorpe Lane, up and down its length, offers a place for shops, banks, offices, and upper floor residences. It will still have its parking but will also support transit usage. This western area has a lot of potential with its proximity to Downtown and the Texas State campus and it is aging, ready to be redeveloped since many of the buildings have outlived their design lifespan. The other areas of Midtown, east of I-35 will likely redevelop in a similar manner. The shopping area along

Hwy 80 is still thriving and it may take longer to see changes there. The area east of I-35 and on both sides of Aquarena Springs Drive will take the longest since many of the apartment complexes here are fairly new and occupied. The middle area east of I-35 has potential because it has easy access on and off of I-35, more undeveloped parcels than in the other areas of Midtown, and a drainage problem that should really be solved with a neighborhood-wide solution that also creates park space.



ARTICLE 4: ILLUSTRATIVE PLAN: MIDTOWN

DIVISION 1: DESCRIPTION

Section A.4.1.1 Current

- A.** Midtown is generally bounded by Aquarena Springs Drive, River Road, Hopkins, and the railroad tracks to the west. Midtown has about 5 areas that appear distinct. In all of them, the roadway network is limited, making it difficult to implement walkable solutions as the area densifies, but not impossible with cooperation among neighbors.
 1. West of I-35 contains Thorpe Lane and Springtown Mall. This is the oldest part of Midtown, with properties that vary widely in size, shape, and uses.
 2. The multifamily area on both sides of Aquarena Springs Drive east of I-35 has large complexes, each cut off from its neighbor, and all of relatively new construction, in 2 and 3 stories.
 3. The area on both sides of Davis Lane south to the railroad tracks is not as built out, and has the best opportunity for new development. The McCoy Building Supply Headquarters is here.
 4. The area east of I-35, between the railroad tracks and Hwy 80 has the Walmart and Sanmar Shopping Plaza.
 5. The houses facing River Road along the Blanco River have their own rural character.

Section A.4.1.2 Future Vision

- A.** Midtown will be a high-density mixed use area, possibly the densest area in San Marcos, with a network of interconnected streets making the area pedestrian and bike friendly. Midtown residents will have easy access to services, city facilities, the University, the San Marcos River, and future trails along the Blanco River. They will have the most diverse options for transportation, including transit connections to the university and the rest of the city. A variety of services will be within walking distance, along the multiple bicycle routes, and through vehicular access to major roads including I-35. The area will

complement, not compete with, Downtown. Due to the lack of historically significant structures, more contemporary architecture will be appropriate. This architecture will differentiate Midtown from Downtown. To improve pedestrian and bicycle access as properties redevelop over time, property owners/developers may need to provide new streets or access ways that will connect to neighboring properties. The plan shows in the western portion of Midtown a greenway that can be used to handle storm water but looks like a park and provides a walking/biking trail through the neighborhood.

- B. Tree Diversity.** Planning for tree diversity helps protect an important environmental and social aspect of the area. Recommended Tree species in Midtown include:

Montezuma Cypress
Cedar Elm
Arizona Cypress
Retama
Texas Ash
Mexican White Oak
Texas Redbud
American Smoke Tree
Anacacho Orchid

Section A.4.1.3 Plan Details

- A** Neighborhood Greens, for the use of local residents are intended to offer a small open space and identify a sense of place for the neighborhood.
- B** Thorpe Lane, should be thought of as the Main Street
- C** New mid-block lanes, for cars, or at a minimum for pedestrians and bicyclists, to take some vehicular traffic off the neighboring streets and provide additional routes for walking and biking.
- D** Railroad tracks
- E** Existing water bodies, some of which could become part of the Midtown Greenway .
- F** New water bodies interconnect to form a neighborhood wide drainage system, called the Midtown Greenway.

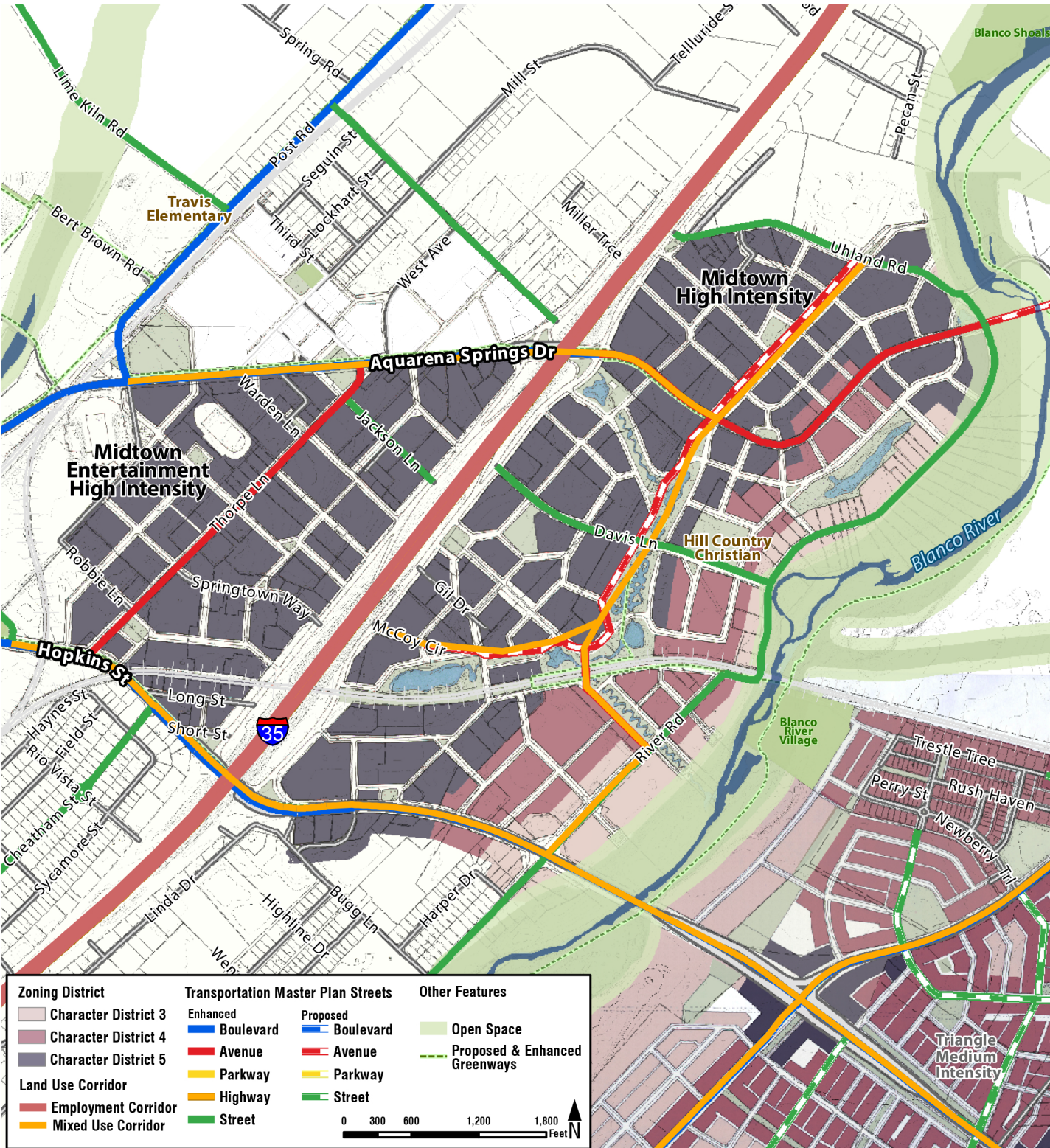
- G** Proposed street with a landscaped median with a trail that someday could connect a river trail to the Midtown Greenway to increase the network of trails within the neighborhood.
- H** Soccer Stadium, Texas State University
- I** Football Stadium, Texas State University



ILLUSTRATIVE PLAN AND 5-MINUTE WALKING CIRCLES

DIVISION 2: ILLUSTRATIVE PLAN

Section A.4.2.1 Midtown Illustrative Plan



ARTICLE 5: ILLUSTRATIVE PLAN: MEDICAL DISTRICT

DIVISION 1: AREA DESCRIPTION

Section A.5.1.1 Current

- A.** At the heart of the Medical District is the Central Texas Medical Center, surrounded by other medical buildings and clinics. The existing commercial development is focused in and around the Red Oak Shopping Center and includes a number of big-box retail stores and a movie theater. Multifamily is the dominant housing type along with some single-family residences along Mockingbird Drive and the La Vista retirement community. The Medical District extends east from I-35 past Hwy 123, north of Cottonwood Creek. A small section follows Hwy 123 north to I-35.

Section A.5.1.2 Future Vision

- A.** Central Texas Medical Center has the potential to become an economic hub and bring additional health care related employment to San Marcos. Mixed uses will allow residents to live, work, and do many day-to-day tasks within the district. The close proximity of these different uses along with connected sidewalks and bike paths will promote pedestrian activity.
- B. Tree Diversity.** Planning for tree diversity helps protect an important environmental and social aspect of the area. Recommended tree species in the Medical District include:

Texas Red Oak
Mexican Buckeye
Mexican Sycamore
Arroyo Sweetwood
Possumhaw Holly
Dessert Willow
Mexican Plum
Bur Oak
Golden Leadball Tree
Yaupon

DIVISION 2: ILLUSTRATIVE PLAN

Section A.5.2.1 Plan Details

Large portions of the Medical District are already developed with the hospital and doctors offices. These areas are unlikely to be redeveloped prior to other areas developing, however, a more complete street network can be identified.

A

A greenway connection linking two parts of existing greenways should connect through the medical district and can become a central feature of this part of the City.

B

An overpass is not conducive to a walkable environment so areas by the intersection can accommodate back of house type activities such as providing additional parking supply.

C

D

Central Texas Medical Center

Neighborhood greens become a focus within new neighborhoods. Buildings front onto these greens rather than turning their backs to them.

E

F

Owen Goodnight Middle School

G

Dezavala Elementary School

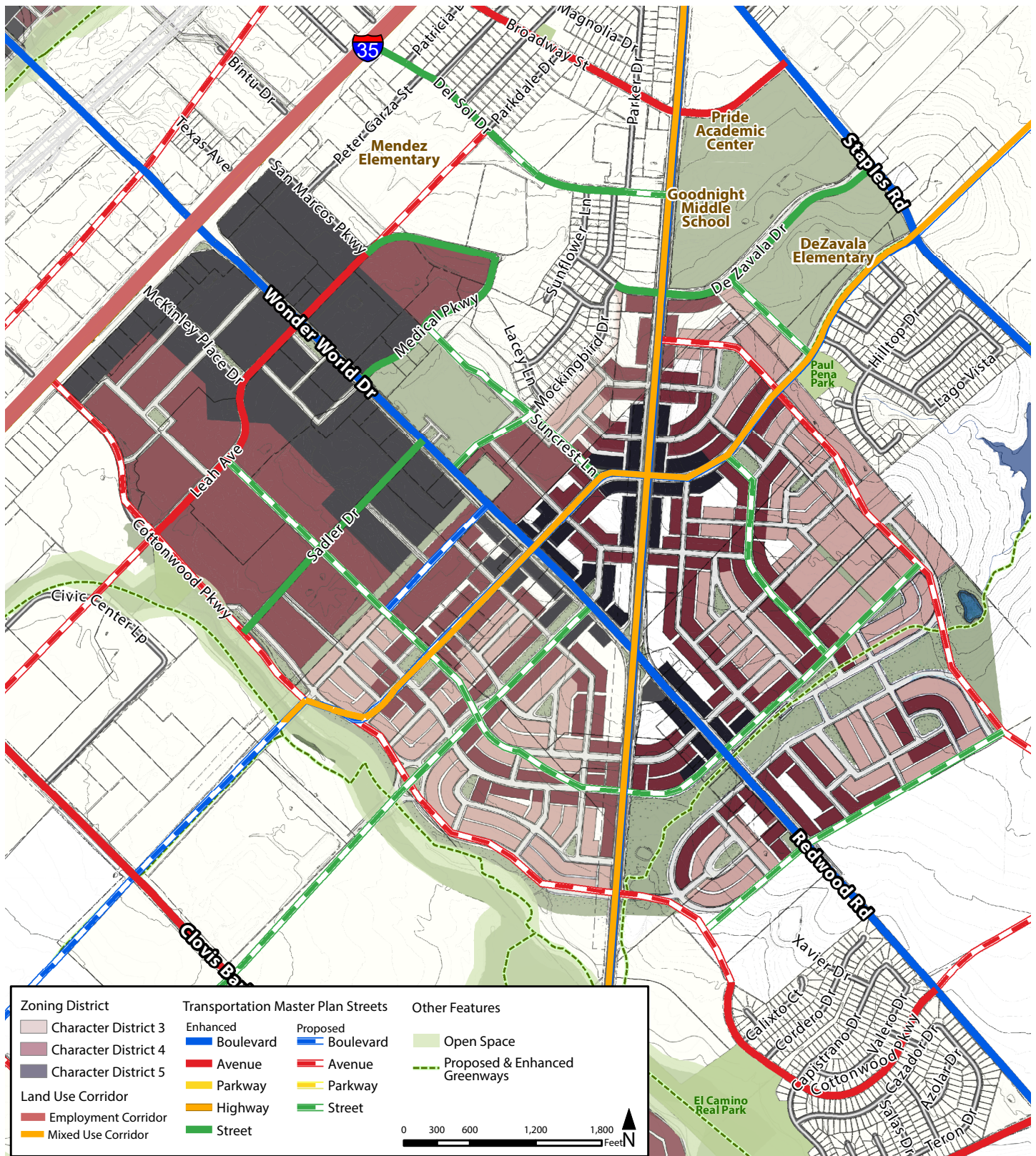
H

Denser areas should be concentrated around common greens and along major thoroughfares.



ILLUSTRATIVE PLAN AND 5-MINUTE WALKING CIRCLES

Section A.5.2.2 Medical District Illustrative Plan



ARTICLE 6: ILLUSTRATIVE PLAN: SOUTH END

DIVISION 1: AREA DESCRIPTION

Section A.6.1.1 Current

- A.** The Hays County Government Center is the civic anchor of the South End. This area also contains the City's first greenfield SmartCode development, under construction as of 2013. Wonder World Drive is a major thoroughfare bordering this development zone on the south. The area, which extends west to Hunter Road and east to the railroad, has seen significant growth recently as more people populate the southern area of town and take advantage of the relatively undeveloped nature of the South End.

Section A.6.1.2 Future Vision

- A.** The South End is envisioned as a new connection between Downtown and the southern part of the city, reducing some of the traffic along Hopkins Street and Hunter Road. The area is anticipated to build out with a medium-intensity mix of commercial and residential of different densities, with the Hays County Government Center drawing strong economic growth.
- B. Tree Diversity.** Planning for tree diversity helps protect an important environmental and social aspect of the area. Recommended tree species in South End include:

Western Soapberry
 Eastern Red Cedar
 Chinkapin Oak
 Cambyi Oak
 Dessert Willow
 Rusty Blackhaw
 Golden Raintree
 Lacebark Elm
 Texas Mountain Laurel
 Texas Kidneywood

DIVISION 2: ILLUSTRATIVE PLAN

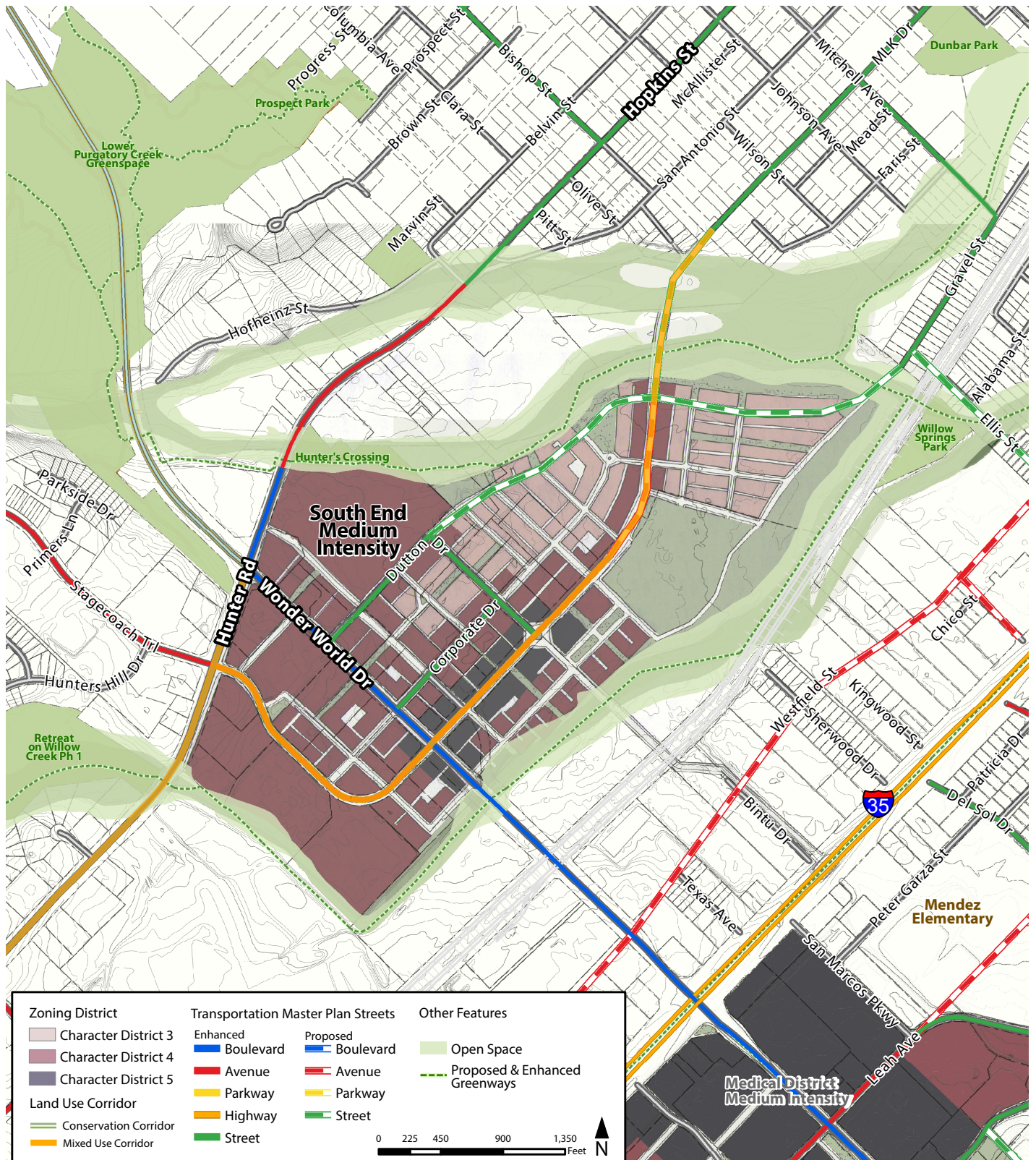
Section A.6.2.1 Plan Details

- The Preferred Scenario in the comprehensive plan identifies the intersection of Wonder World Drive and Stagecoach Trail as the future neighborhood center. The combination of a plaza at this intersection and street-oriented development will help to create an identifiable center.
- A** A new road extension from the neighborhood center to I-35 will strengthen access and connectivity to the South End.
- B** A formal park is planned to align with the entry to the Hays County Government Center.
- C** Creating a grid network of streets that integrates the existing apartment complexes, helps to connect residents to daily needs such as open space, shopping, and entertainment.
- D** Future connections to downtown can be achieved by extending Stagecoach Trail and Gravel Street.
- E** Parks, paths, and open spaces throughout the neighborhood are essential amenities for pedestrians and residents.
- F** The floodway is preserved within the South End.
- G** Wonder World Drive is currently the primary route to the South End.
- H** Stage Coach Trail is envisioned to be the future "main street" of the neighborhood.
- I**



ILLUSTRATIVE PLAN AND 5-MINUTE WALKING CIRCLES

Section A.6.2.2 South End Illustrative Plan



ARTICLE 7: ILLUSTRATIVE PLAN: TRIANGLE

DIVISION 1: DESCRIPTION

Section A.7.1.1 Current

- A.** The Triangle is centered on the intersection of Hwy 21 and Hwy 80, approximately one mile east of Interstate 35. It is generally bounded by Old Martindale Rd. (CO 295), County Line Road (CO 101), the railroad tracks, and open space along the San Marcos River. This area is mostly undeveloped, with agricultural uses, a golf course and some single-family housing established in between the Blanco River and Highway 21. Only a small portion of the Triangle is currently within the City Limits.

Section A.7.1.2 Future Vision

- A.** The Triangle is envisioned as an important medium-intensity zone for commercial activity and residential development on the east side of I-35. It is one of the primary routes to the San Marcos Airport and will act as a gateway in the future, providing amenities to serve airport customers and commuters. Gary Job Corps is also located in the vicinity of the Triangle and workforce education opportunities are envisioned with the institution. Land uses in the future will reflect these two important facilities – a mix of office, commercial and light industrial will complement new single family neighborhoods along the scenic Blanco River.
- B. Tree Diversity.** Planning for tree diversity helps protect an important environmental and social aspect of the area. Recommended tree species in the Triangle include:

Thornless Honey Locust
Southern Wax Myrtle
Shumard Oak
Texas Ash
Anaqua
Mexican Plum
Eastern Red Cedar
American Elm
Caddo Maple
Possumhaw
Pomegranate

DIVISION 2: ILLUSTRATIVE PLAN

Section A.7.2.1 Plan Details

- A** The Triangle is comprised of approximately four neighborhoods as measured by a 5-minute walk from center to edge.
- B** Commercial development clusters around the intersection of Hwy 21 and Hwy 80.
- C** A community square off of Hwy 80 away from the overpass allows for a pedestrian-friendly mixed-use center.
- D** Areas of land are preserved for community agricultural purposes.
- E** Sensitive lands such as the floodway and historic burial mounds are preserved.
- F** Linear neighborhood greens provide a civic amenity and help to manage stormwater when necessary.
- G** A walkable block and street network is established. Buildings should front toward the street with parking accessed from alleys and parking lots in mid-block locations.
- H** The block and street network could continue across County Line Road and Old Martindale Road.
- I** When possible, lots side toward Hwy 21 and Hwy 80 to provide better street addresses.



ILLUSTRATIVE PLAN AND 5-MINUTE WALKING CIRCLES

Section A.7.2.2 Traingle Illustrative Plan



ARTICLE 8: ILLUSTRATIVE PLAN: EAST VILLAGE

DIVISION 1: DESCRIPTION

Section A.8.1.1 Current

- A. The East Village is a growth area toward which the City has been progressively expanding in recent years. Its north boundary is defined by the greenspace surrounding Cottonwood Creek, and the southern boundary extends just beyond McCarty Lane and Rattler. Currently, the East Village contains two of San Marcos’s newest public schools, San Marcos High School and James Bowie Elementary. Its primary residential area is the Cottonwood Creek subdivision, which contains single-family housing. East Village also contains areas currently zoned for commercial and industrial uses around the two very promising intersections of Old Bastrop and Hwy 123, as well as Clovis Barker and Hwy 123. Much of the property in the East Village has yet to be included within city limits and is therefore not currently zoned.

Section A.8.1.2 Future Vision

- A. As the site of San Marcos’ only high school, as well as an elementary school, this area has a high potential for growth. Designated as a Medium Intensity Zone, East Village will boast a mix of commercial, retail, and service oriented activity. This area will offer a variety of residential options including single family homes, duplexes, townhomes, and small multifamily projects. Some multifamily projects combined with commercial will result in vertical mixed use in the activity node. Since the area is largely on undeveloped property at the edge of town, it will become a mixed use gateway into the city, which will welcome visitors from Seguin and beyond.
- B. **Tree Diversity.** Planning for tree diversity helps protect an important environmental and social aspect of the area. Recommended tree species in South End include:

- Lacey Oak
- Eve’s Necklace
- Husiache
- Mexican Redbud
- Mexican White Oak
- Mexican Sycamore

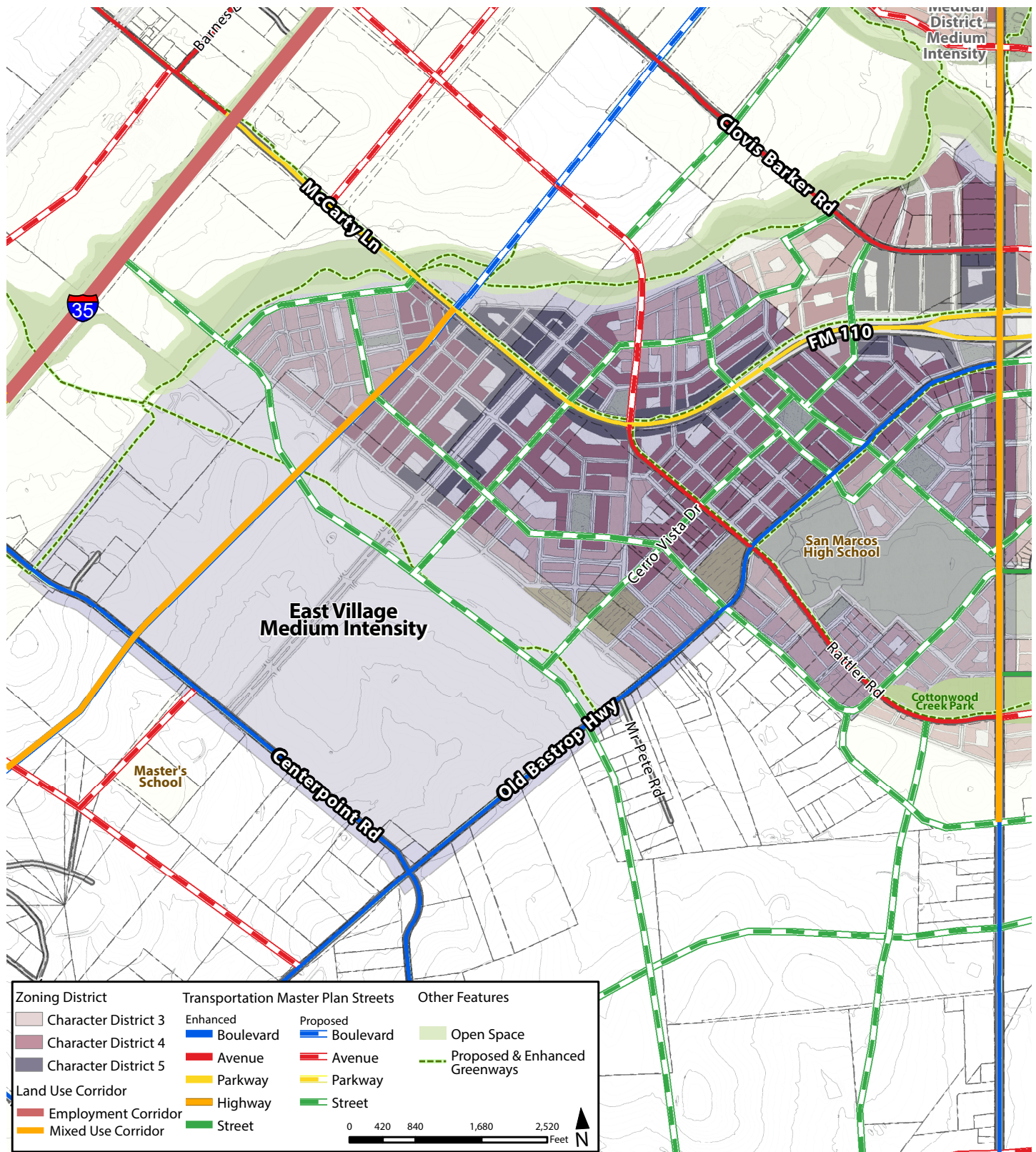
- Mexican Plum
- Arizona Cypress
- Mexican Olive
- Flameleaf Sumac

DIVISION 2: ILLUSTRATIVE PLAN

Section A.8.2.1 Plan Details

- A San Marcos High School
- B Bowie Elementary School
- C Neighborhoods can develop around the high school making it part of the community instead of isolated from the rest of the City.
An overpass is planned to start construction at the intersection of McCarty Lane and Hwy 123. This type of street is not conducive to a walkable environment so areas by the intersection can accommodate back of house type activities such as providing additional parking supply.
- D A new road based on the Transportation Master Plan connects the East Village and Medical District.
- E Some farm land can be preserved with community agriculture.
- F Neighborhood greens become a focus within new neighborhoods. Buildings front onto these greens rather than turning their backs to them.
- G Ample sidewalks and slow speeds on Guadalupe Street will give many children the opportunity to walk and/or bike to and from school
- H McCarty Lane becomes a walkable corridor with clustered density. Buildings should front toward the street with parking accessed from alleys and parking lots in mid-block locations.
- I

Section A.8.2.2 East Village Illustrative Plan



APPENDIX B. STREET DESIGN MANUAL

ARTICLE 1: PARKLETS.....C:2

DIVISION 1: ABOUT PARKLETS C:2

DIVISION 2: HOW DO I APPLY? C:3

DIVISION 3: PARKLETS DESIGN C:3

DIVISION 4: RESPONSIBILITIES OF PERMIT HOLDERS C:5

ARTICLE 2: SIDEWALK CAFESC:7

DIVISION 1: ABOUT SIDEWALK CAFES C:7

DIVISION 2: HOW DO I APPLY? C:7

DIVISION 3: SIDEWALK CAFES DESIGN C:8

DIVISION 4: RESPONSIBILITIES OF PERMIT HOLDERS C:8

ARTICLE 3: NEIGHBORHOOD GATEWAY FEATURES C:12

DIVISION 1: INTRODUCTION C:12

ARTICLE 4: EXISTING STREETS C:14

DIVISION 1: GENERAL C:14

ARTICLE 5: MIDTOWN STREETSCAPE C:40

ARTICLE 1: PARKLETS

DIVISION 1: ABOUT PARKLETS

Section B.1.1.1 Introduction.

- A. Purpose.** In cities across the country, there is a movement afoot to reclaim and repurpose underutilized spaces for people through the use of parklets. Parklets are the reuse of on-street parking spaces or unused portions of right-of-way to provide amenities and green space for the general public. Parklets are intended as aesthetic enhancements to the streetscape and can incorporate seating, plantings, bike parking, and art, providing an economical solution to the need for increased public open space. The City of San Marcos has enacted a Pilot Parklet Program allowing 5 total parklets within a one-year period subject for review by the San Marcos City Council.
- B. What are Parklets?** Parklets are generally one parking space long and are built out of semi-permanent materials installed in a way that does not require reconfiguring the roadway or pouring concrete. By not requiring a concrete base, parklets are a fast and less expensive way for the City to bring sidewalk improvements to a neighborhood. Parklets are used to encourage pedestrian oriented development and have been shown to increase the economic activity of the neighborhood. While parklets are funded and maintained by businesses, residents, and community organizations, they are intended to provide benefits to all uses of the public rights-of-way.
- C. Origins.** The parklet initiative was first introduced in San Francisco in 2009 through a city-wide Park(ing) Day. The program encouraged citizens to design and install a temporary park within a parking space resulting in 975 “parks” in 162 cities across 35 countries and 6 continents. The San Francisco Planning Department led the initial effort to install a Parklet Pilot Program known as Pavement to Parks. In order to avoid a lengthy permit process, it defined this project as “removable” in character and implemented a unique design and construction guidelines manual.
- D. Benefits and Purpose.** Parklets have significant implications for cities. By increasing pedestrian activity and encouraging pedestrians to linger in an area longer parklets encourage economic growth. San Francisco’s first parklet, sponsored by Mojo Bicycle Café, featured a simple design with bright red

tables, silver chairs, and three bike racks. The results were impressive:

1. 37% rise in weekday evening pedestrian traffic;
2. 14% increase in the number of people walking their bikes within the study area;
3. 10% rise in positive public perception of the area’s community character. As more cities and downtowns become aware of these advantages, it can be expected for parklets to continue to grow in popularity. With this, the trend of reclaiming space for people will continue to grow, one parking space at a time.



DIVISION 2: HOW DO I APPLY?**Section B.1.2.1 Parklet Application Process**

A. Pre-Application. Prior to submitting an application, applicants are required to schedule an appointment for a Pre-Development meeting with the Planning and Development Services Department to verify the viability of the location and proposed elements. Parklets should be proposed in areas where they are likely to be used and active. The results of the Pre-Development meeting do not guarantee approval of the Parklet location and design.

B. Application and Process. After the Pre-Development meeting, the applicant may begin the process of completing the application and supporting materials. A completed application will include the following:

1. City of San Marcos Parklet Application
2. Application Fee submitted with Application
3. A map, survey, drawing, aerial photograph, site plan or similar information showing the footprint/outline of the proposed parklet, including dimensions of parklet, property lines, existing sidewalk width, existing parking stalls/alignment and all existing sidewalk furniture and obstructions; e.g. fire hydrants, utility poles, street trees, etc.
4. A description of type(s) of elements proposed to be placed in the parklet; e.g. tables, chairs, benches, planters/landscaping, bicycle parking, etc.
5. Final dimensioned site plan including all details, plant species, furniture types, etc.
6. City of San Marcos License and Maintenance Agreement
7. Proof of Insurance as required
8. Documentation of support from abutting property/business owners is required. Additional documentation of community support is encouraged.

C. Application Review. The application package, including all supporting materials, should be submitted to the City of San Marcos Planning and Development Services Department. The application will be reviewed by City Staff to determine if the

application meets all designated requirements. Additionally, reviewing staff will analyze aspects of the application and plans such as enhancement of streetscape, location, community support, and maintenance plan.

DIVISION 3: PARKLETS DESIGN**Section B.1.3.1 Design Guidelines**

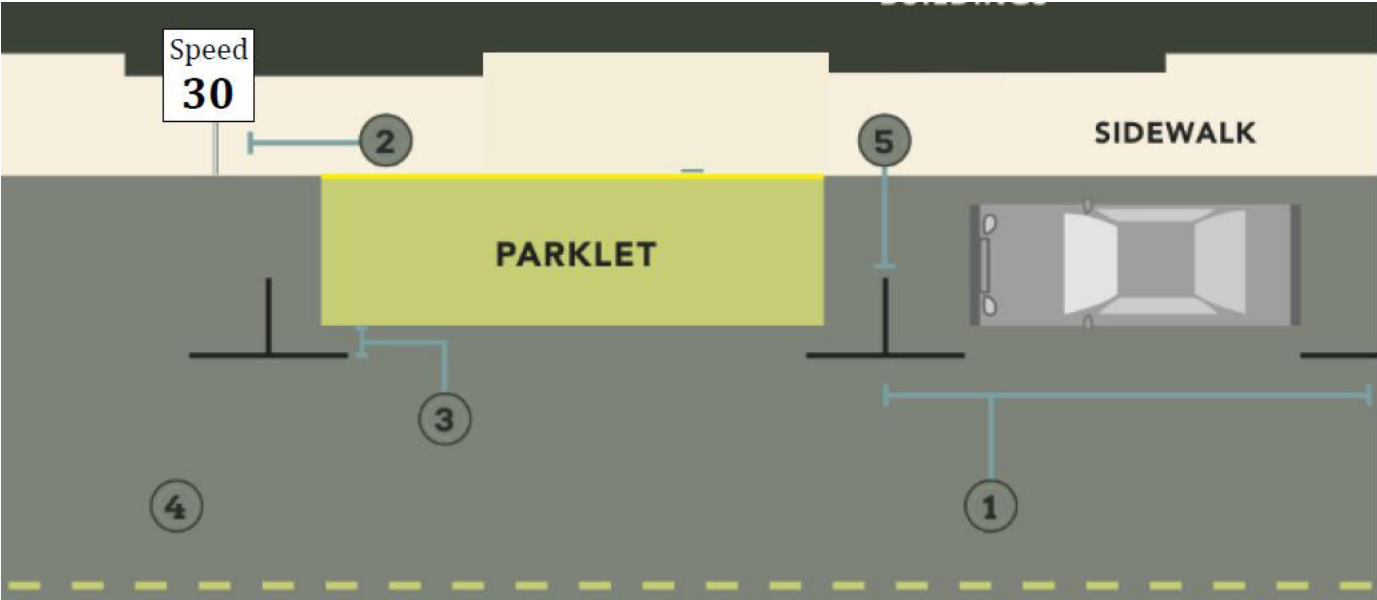
- A. General.** The parklet design and location shall conform to the following design guidelines, as well as any additional standards made part of the approval of the individual parklet. Additional requirements and further details can be found in the City Code.
- B. Locations.** Parklets are allowed in parallel parking spaces or within unused right-of-way.
- C. Corner Locations.** The proposed parklet site should be located at least one parking spot from a corner or protected by a bollard, sidewalk bulb-out, or other similar feature, if located at the corner.
- D. Speed Limit.** Parklets should be located where the posted speed limit is 30 mph or less. Streets with higher speed limits may be considered on a case-by-case basis.
- E. Street Slope.** Parklets should be situated on streets with a running slope (grade) of five percent or less.
- F. Buffers.** Parklets shall be required to have reflective tape, soft hit posts, wheel stops, and depending on proposed location, may require edging such as planters, railings, or cables to protect users from street traffic. Parklets must be situated a minimum of 2 feet from the nearest edge of traveled way. Planters used as edging features are required to be large,

durable, and not easily removed. All edging and buffering mechanisms will require City approval. Parklets located in unused portions of right-of-way require curb stops per City specifications.

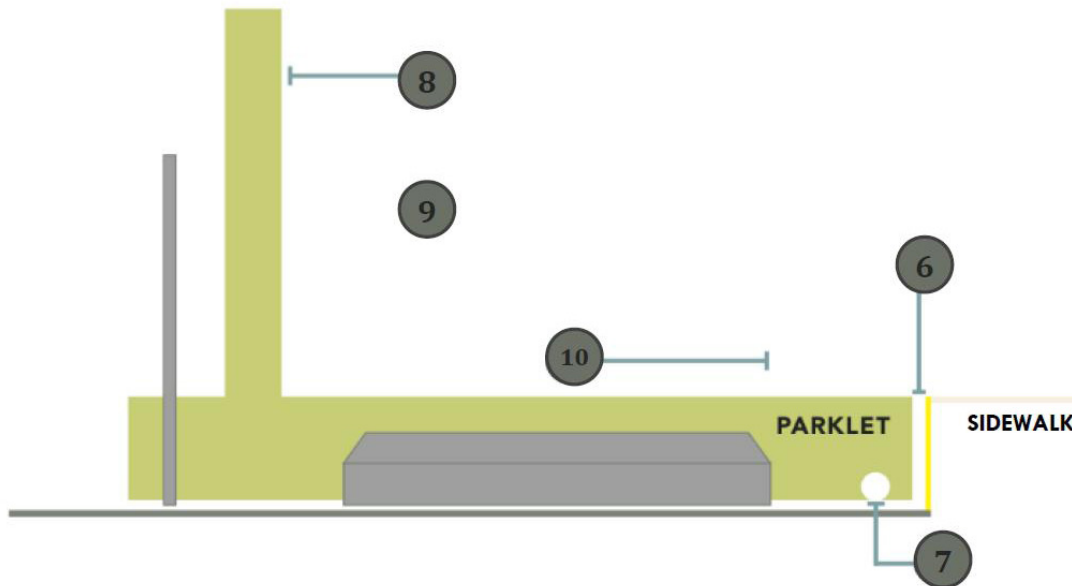
- G. Utilities.** Parklets shall not be allowed in front of a fire hydrant, or over a manhole, public utility valve, or cover. Curb and roadside drainage should not be impeded by the parklet. The platform should allow for easy access underneath the platform and curbside drainage may not be impeded. A gap of 6" should be maintained between the body of the deck and the curb to facilitate the movement of water.
- H. ADA Requirements.** All elements of Parklets shall be constructed and/or installed to conform to the Americans with Disabilities Act (ADA).
- I. Design for Easy Removal.** Parklets are temporary in nature and must be designed for easy removal. All removable furniture must be locked or stowed each night.

- J. Parklet Decking.** Parklet decking must be flush with the curb and may not have more than ½" gap from the curb. A minimum 36" ADA accessible entryway to the parklet must be maintained for all parklets. Platforms shall not exceed a 2% cross slope. Decking will need to be constructed of durable material capable of withstanding weather elements. Deck installation shall not damage sidewalk, street, curb, or any aspect of the public right-of-way.
- K. Edging.** All edging shall be visually permeable. All rails must be capable of withstanding a 200 lb horizontal force.
- L. Materials.** Materials should be high quality, durable, and waterproof. Loose particles such as sand or loose stone are not permitted within the parklet area. All furniture must be designed for outdoor use.
- M. Visual Design.** Parklet designs must maintain a visual connection to the street and not obstruct sight lines to existing businesses or roadway signage. While not visible from the sidewalk, the parklet's back is highly visible from across the street. Large blank walls, therefore, are discouraged.

PARKLET PLACEMENT GUIDELINES



- 1** Located at least one parking stall from a corner (If located at corner, parklet must be protected by a bollard, sidewalk bulb-out, or other similar feature).
- 2** In an area with a posted speed limit of 30 mph or slower.
- 3** Minimum 2 feet from the nearest edge of traveled way.
- 4** Street has a grade of no greater than 5%.
- 5** Must have reflective tape, soft hit posts, wheel stops, and additional edging such as large planters to provide safety buffer.



- 6 Parklet decking must be flush with the curb and may not have more than $\frac{1}{2}$ " gap from the curb. If this is impossible, the parklet must be ADA accessible. A minimum 36" ADA accessible entryway to the parklet must be maintained for all parklets.
- 7 The platform should allow for easy access underneath the platform and curbside drainage may not be impeded. A gap of 6" should be maintained between the body of the deck and the curb to facilitate the movement of water.
- 8 All edging shall be visually permeable.
- 9 All rails must be capable of withstanding a 200 lb horizontal force.
- 10 Platforms shall not exceed a 2% cross slope.

DIVISION 4: RESPONSIBILITIES OF PERMIT HOLDERS

Section B.1.4.1 General Requirements

- A. Keep parklet free and open to all members of the public.
- B. Keep parklet well maintained and in good repair with daily cleaning.
- C. Keep parklet free of debris, grime, and graffiti.
- D. Water and maintain all parklet vegetation.
- E. Provide pest control as needed.
- F. No table service or alcohol in the parklet.
- G. No smoking in the parklet.
- H. Amplified music is prohibited in parklets.
- I. Provide trash and recycling receptacles.

Section B.1.4.2 Trash and Recycling Requirements.

- A. Provide pre-approved trash and recycling receptacles in accordance with City standards. Scheduled pick-up of receptacles will need to be contracted through the City. Receptacles are encouraged to be designed creatively considering the design meets the following guidelines:
- B. Receptacles must be no larger than 18 gallons.
- C. Trash receptacles shall be black in color; recycle receptacles shall be blue in color.
- D. Shall be constructed of durable, waterproof materials.
- E. Shall include a cover.

TRASH AND RECYCLING RECEPTACLE EXAMPLES



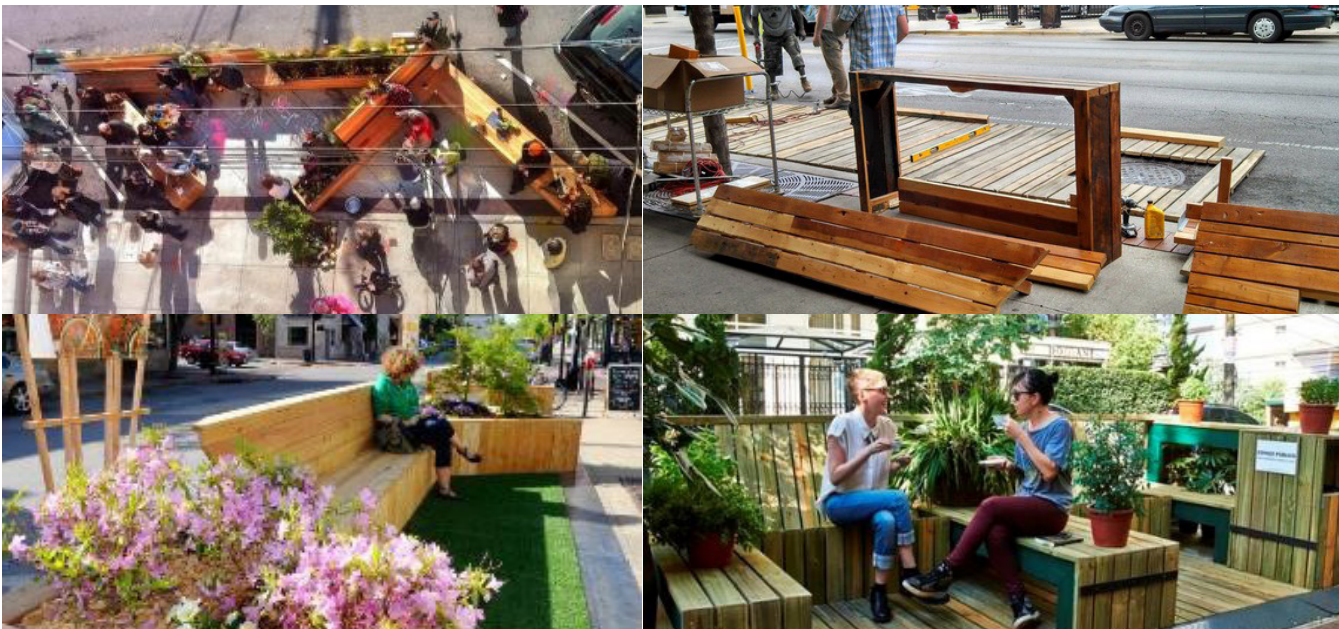
Appropriate color scheme

Creative design

Covered enclosure

Section B.1.4.3 Additional Parklet Resources

For additional information on parklet origins, design, and inspiration from other cities, please view the San Francisco Parklet Manual V.2, <http://pavementtoparks.sfplanning.org/parklets.html>



ARTICLE 2: SIDEWALK CAFES

DIVISION 1: ABOUT SIDEWALK CAFES

Section B.2.1.1 Introduction

A. Purpose. Sidewalk Cafés and restaurant seating help to enliven the sidewalk environment, encourage economic development, and to activate the space in the public right-of-way. Guidelines have been established to balance safety, aesthetics, accessibility, and commercial prosperity. The City of San Marcos encourages sidewalk cafés to increase public use, enjoyment and safety. With proper design and management, sidewalk cafés can be a great way to encourage walking, add vitality to the street and promote local economic development.

DIVISION 2: HOW DO I APPLY?

Section B.2.2.1 Sidewalk Cafe Application

A. Pre-Application. Prior to submitting an application, applicants are required to schedule an appointment for a Pre-Development meeting with the Planning and Development Services Department to verify the viability of the location and proposed elements and to verify the applicant is in good standing with operating a Food Establishment Permit. The results of the Pre-Development meeting do not guarantee approval of the Sidewalk Café location and design.

B. Application and Process. After the Pre-Development meeting, the applicant may begin the process of completing the application and supporting materials. A completed application will include the following:

1. City of San Marcos Sidewalk Café Application
2. Application Fee Submitted with Application
3. License and Maintenance Agreement
4. Proof of Insurance as required
5. Property Owner Authorization
6. Detailed Site Plan
7. Supporting design materials i.e. fence/barrier details, planter boxes, types of chairs/tables.

8. Installation method of fencing/barrier and tables. If bolting of barrier is proposed, removal method will need to be submitted to the City for approval. A surety bond is required for the estimated cost of removal.

C. Application Review. The application package, including all supporting materials, should be submitted to the City of San Marcos Planning and Development Services Department. The application will be reviewed by City Staff to determine if the application meets all designated requirements. Additionally, reviewing staff will analyze aspects of the application and plans such as enhancement of streetscape, location, community support, maintenance plan, and compliance with Texas Food Establishment Rules.





- D. Approval.** Once City staff determines an application is complete and all City departments determine that the application, plans, and associated documents meet the standards set forth by the City of San Marcos Streetscape Improvements Manual, the permit will be administratively approved. A Conditional Use Permit for on-premise consumption of alcohol may require an additional review processes.
- E. Alcohol.** If on-premise consumption of alcohol is proposed, the establishment must conform to all TABC requirements and submit for a Conditional Use Permit (CUP) application to the Planning and Development Services Department. Please contact 512.393.8230 for additional information.

DIVISION 3: SIDEWALK CAFES DESIGN

Section B.2.3.1 Design Guidelines

Sidewalk cafés must meet the following design requirements. Additional requirements and further details can be found in the City Code.

- A.** Must be associated with a restaurant with kitchen facilities for the preparation of the food to be sold, the primary business of which is the on-premises sale of prepared food.
- B.** The kitchen facilities must be a permitted Food Service Establishment in good standing.
- C.** Must be located on a sidewalk abutting and within the span of the façade of the restaurant.
- D.** Must not interfere with visibility for drivers at street corners.
- E.** Must be open to the air.
- F.** Must contain removable tables, chairs, planters or other appurtenances that should be locked or stowed nightly.
- G.** Chairs, tables, and outdoor appurtenances must be durable, waterproof, and built to maintain weather.
- H.** Must maintain a minimum of 6 feet clearance along sidewalk.
- I.** Amplified music is prohibited in Sidewalk Cafés.
- J.** Cooking appurtenances are prohibited within the sidewalk café.
- K.** Propane heaters are allowed on a case-by-case basis subject to Fire Marshal approval.
- L.** All elements of Sidewalk Cafés shall be constructed and/or installed to conform to the applicable provisions, rules, regulations, and guidelines of the Americans with Disabilities Act (ADA).
- M.** Any proposed signage must comply with Sign Ordinance. Advertising on umbrellas in sidewalk cafés is prohibited.

DIVISION 4: RESPONSIBILITIES OF PERMIT HOLDERS

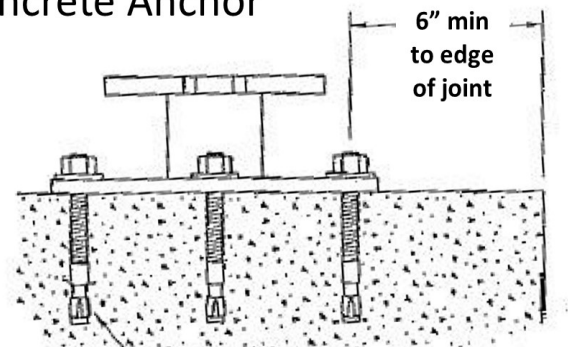
Section B.2.4.1 General Requirements

- A.** Permit holders are responsible for all maintenance within the sidewalk café.
- B.** The permit holder is responsible for ensuring all activities on the sidewalk stay within the approved area.
- C.** Food trays, carts, receptacles for dirty dishes, etc. shall not be placed or stored on any portion of the sidewalk.
- D.** Must use non-disposable dishes, silverware, and linens to prevent items from blowing off tables.
- E.** Sidewalk café must be free of debris, grime, and graffiti.
- F.** Planter boxes within sidewalk cafés must be watered and maintained.
- G.** Sidewalk café must contain removable tables, chairs, planters or other appurtenances that should be locked or stowed nightly according to City standards and best methods. Bolting of fence/barrier is allowed with City approval.

- H. The permit holder must provide for at least one trash receptacle that is emptied during the day and every night.
- I. No smoking in the sidewalk café.
- J. Barriers. If fences, planter boxes, or other barriers features are proposed surrounding the sidewalk café, ensure that they do not cause damage to the sidewalk and are constructed and artfully designed. Barriers help define the sidewalk café area while also maintaining transparency and aesthetic design.
- K. Fencing must not exceed 42" in height.
- L. Fencing must be generally transparent. Solid sheet fencing surfaces are not permitted.
- M. Fencing must be constructed of high-quality finish materials. Fencing should be constructed with a railing, rope, or other horizontal element; posts with pointed tops are not permitted.
- N. Landscaped planters may be used as a fencing device.
- O. Stand-alone fencing mechanisms must have a flat base. Rounded fence bases are prohibited.
- P. All fencing required for the purposes of on-premise consumption of alcohol will require TABC approval.
- Q. All sidewalk café barriers and appurtenances must be maintained to the standards of the original permit for the duration and life of the sidewalk café.
- D. All bolts, bolting methods, and proposed layout of bolting location must be pre-approved by the City.
- E. If bolting of fencing is proposed, removal method will need to be submitted to the City for approval.
- F. If bolting is proposed, a surety bond will need to be submitted to the City for the estimated cost of removal in accordance with Ordinance 2015-01.
- G. Any bolting or damages to the sidewalk will need to be remediated. Sidewalk will need to be brought to original conditions.

BOLTING SPECIFICATION

Concrete Anchor



5/8" diameter Concrete Anchor – 8 places – embed a minimum of 5 ½" and torque to min. of 50 ft-lbs. Anchor may be expansion or adhesive type.

SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Section B.2.4.2 Materials and Furniture.

- A. Tables, chairs, and outdoor appurtenances must be durable, waterproof, and able to withstand weather elements. All sidewalk café furniture and appurtenances must be maintained to the standards of the original permit for the duration and life of the sidewalk café. The following images outline allowed and prohibited material and furniture types.

Section B.2.4.3 Installation and Removal

- A. Core drilling or setting of posts for sidewalk café fencing or additional apparatuses is prohibited.
- B. Bolting or stand-alone bases are permitted.
- C. Bolting must be no greater than 2 inches in length and accompanied by an epoxy.

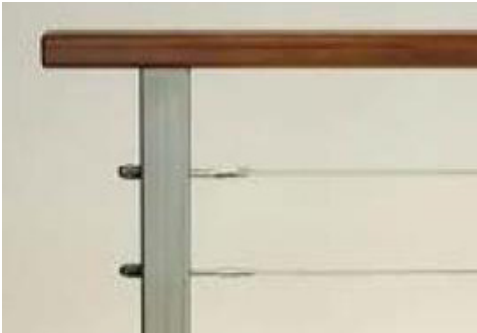
Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMW-6100,, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 ½" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

BARRIERS, MATERIALS, AND FURNITURE EXAMPLES

Allowable Barriers: planter boxes, movable pots, rod iron, flat footing



Prohibited Barriers: chain link, unstable sectional fencing, waste receptacles, rounded barriers, cables



Allowable Materials: metals, finished grade wood, sturdy recycled materials



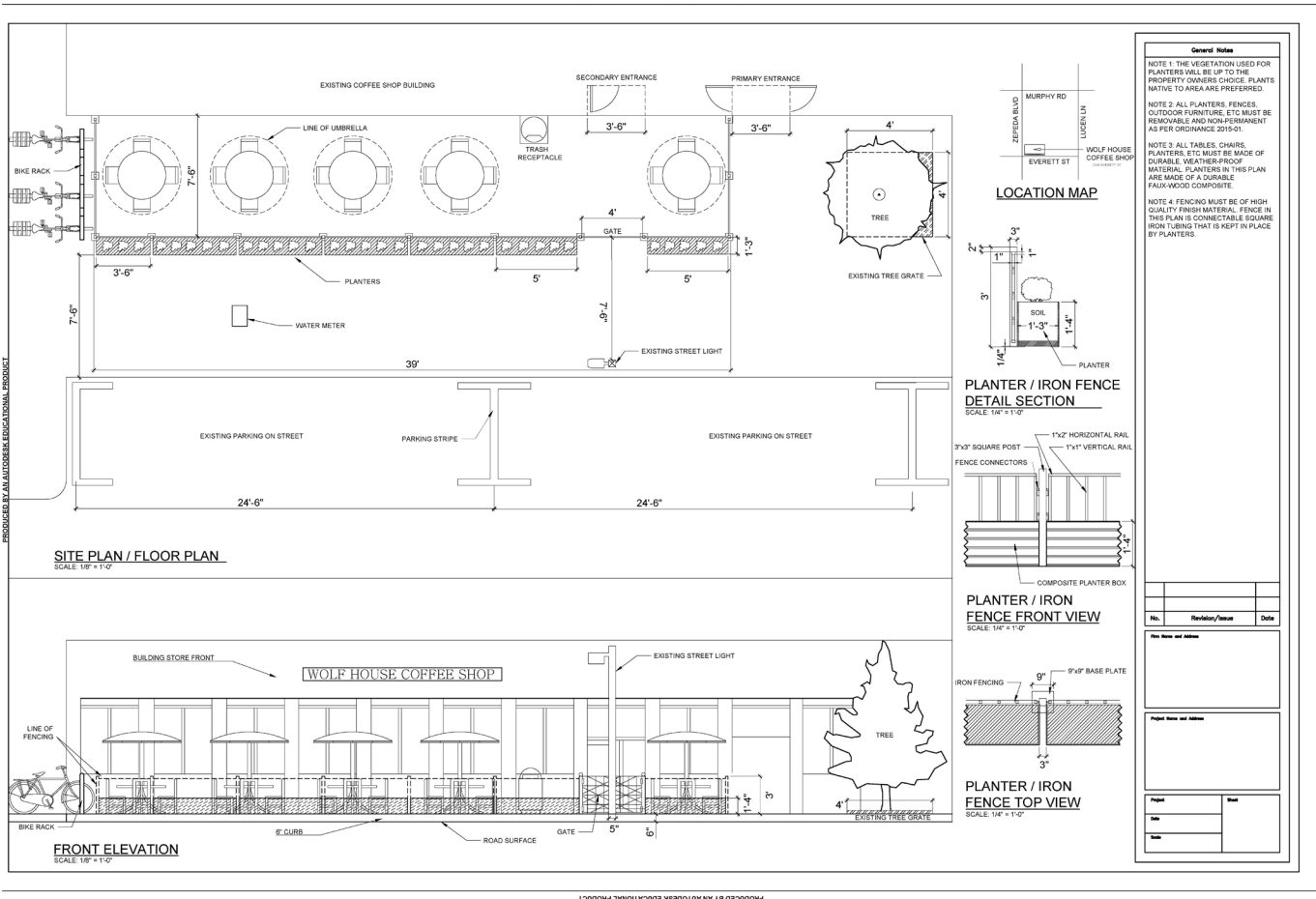
Prohibited Materials: breakable plastics, unfurnished lumber, turf, sofas



Section B.2.4.4 Site Plan Requirements

- A. Location of entrances and exits to the business hosting the sidewalk café.
- B. Location and number of tables, chairs, seating area.
- C. Location of any proposed curbside fencing (required if serving alcohol).
- D. Location of fire hydrants, trees, utilities, above ground fixtures, doorways, and any obstructions.
- E. Dimensions of the Host's building frontage.
- F. Notations of Americans with Disabilities Act (ADA) – compliant seating area.
- G. Indicate how sidewalk café will be separated from pedestrian walkway.
- H. Indicate detailed specifications and layout of any proposed bolting of barriers/fencing to sidewalk.

EXAMPLE SIDEWALK CAFE SITE PLAN



ARTICLE 3: NEIGHBORHOOD GATEWAY FEATURES

DIVISION 1: INTRODUCTION

Neighborhood gateway features have the ability to provide entries for both pedestrian and vehicular traffic. Architecture, materials, and view may be highlighted to give residents a sense of identity and community.

Section B.3.1.1 Neighborhood Gateway Features Design

- A. Purpose.** Gateways should aim to highlight the architectural and natural character of the area. Each gateway should be reflective of its unique surroundings and design intent. Gateways should include some or all of the following:
- 1. Materials.** Such as wood and brick should be incorporated into the design that are durable in nature.
 - 2. Landscaping.** Should be distinctive and utilize native plant species. Vegetation should be used to frame the scenic view and provide textural interest. All landscaping will need to be maintained and irrigated.
 - 3. Lighting.** Is a unique and effective way of designing a neighborhood gateway. All Lighting is required to conform to Dark Sky Requirements.

Section B.3.1.2 Location and Standards

A. General Standards

1. Gateway features and structures in the right-of-way must not prohibit access to utilities
2. The height of the structure or feature must not exceed the allowable height of the zoning district.
3. Structures or features must maintain a 10 foot setback between the edge of the Street or Sidewalk.
4. Additional License and Maintenance requirements can be found within Chapter 74 of the City Code.

- B. Signage.** All signage within the public right-of-way will need to comply with Article 3 Sign Standards established within the Land Development Code.

- C. Site Plans and Permits.** Applications for structures within the right-of-way are required to submit the following permits:

1. Building Permit
2. Complete Site Prep Permit or Small Site Permit (depending on square footage of improvements)
3. License and Maintenance Agreement

EXAMPLES OF NEIGHBORHOOD GATEWAY FEATURES





ARTICLE 4: EXISTING STREETS

DIVISION 1: GENERAL

Section B.4.1.1 Streetscapes

- A. Purpose.** The purpose of the existing streets portion of this design manual is to provide guidance for the coordinated and incremental re-development of streetscapes that reflects the character and context of the area.
- B. Right-of-way.** Existing streets in urban areas are frequently constrained by buildings and other infrastructure on private property immediately adjacent to the existing right-of-way, making additional right-of-way difficult to acquire.
- C. Private Easements.** When additional space is needed to accomodate minimum streetscape elements a private easement may be required for elements of the pedestrian realm including sidewalks and landscaping strips.

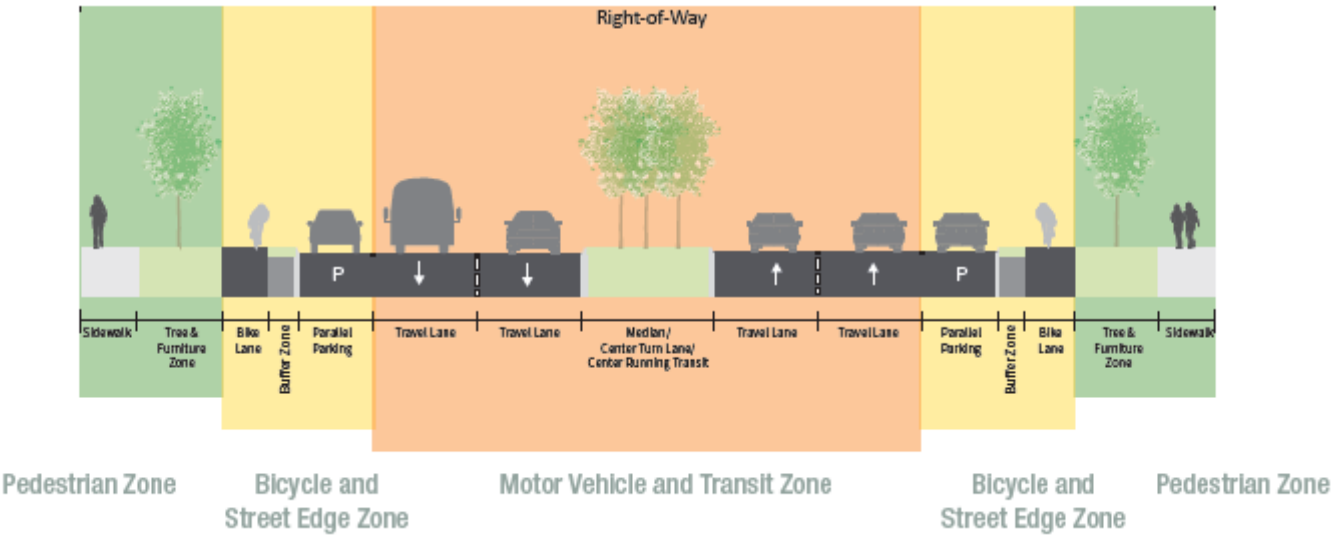
Section B.4.1.2 Street Zones

- A.** A street can be comprised of several different elements. Required streetscapes always contain the pedestrian zone and may contain the bicycle and street edge zone.

- B. Pedestrian Zone.** The pedestrian zone contains sidewalks, tree planting areas, street furniture, and utilities. When constrained, the pedestrian zone may extend onto private property through the use of pedestrian access or utility easements.
- C. Constrained Pedestrian Zone.** The minimum widths for constrained sidewalks and planting areas are included below for each of the required streetscape types.

STREETSCAPE TYPE	SIDEWALK		PLANTING	
	Preferred	Constrained	Preferred	Constrained
MAIN STREET	10'	6'	7'	4'
CONVENTIONAL	6'	5'	7'	4'
MIXED USE	8'	5'	7'	4'
MULTI-WAY	10'	6'	7'	4'
RESIDENTIAL	5'	4'	7'	4'

- D. Bicycle and Street Edge Zones.** The bicycle and street edge zone does not always exist as a street element. When bike or parking facilities are required by this development code or requested by the developer the configuration and construction of those facilities may be reviewed and approved by the responsible official.



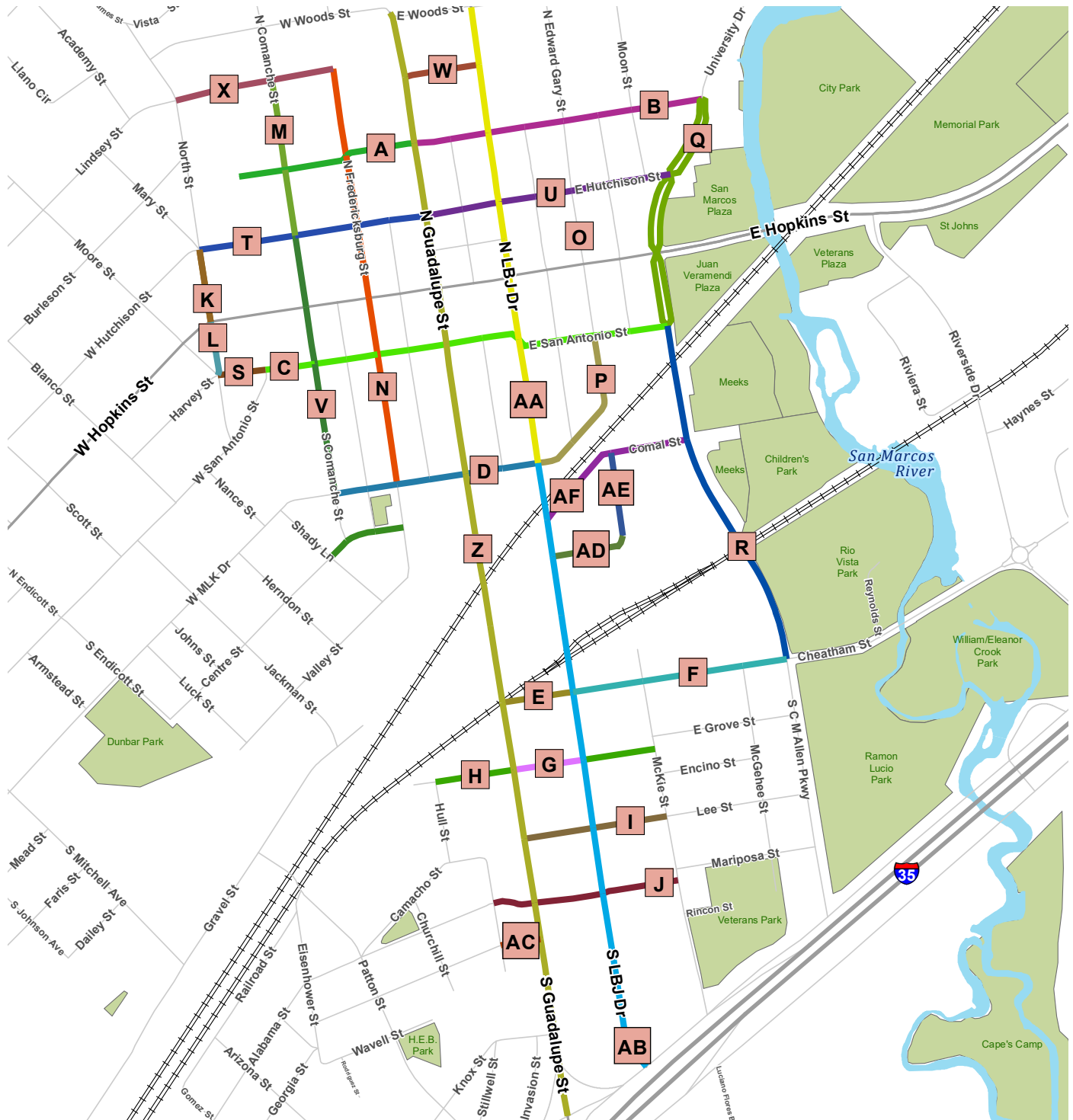
Section B.4.1.3 Main Street Streetscape

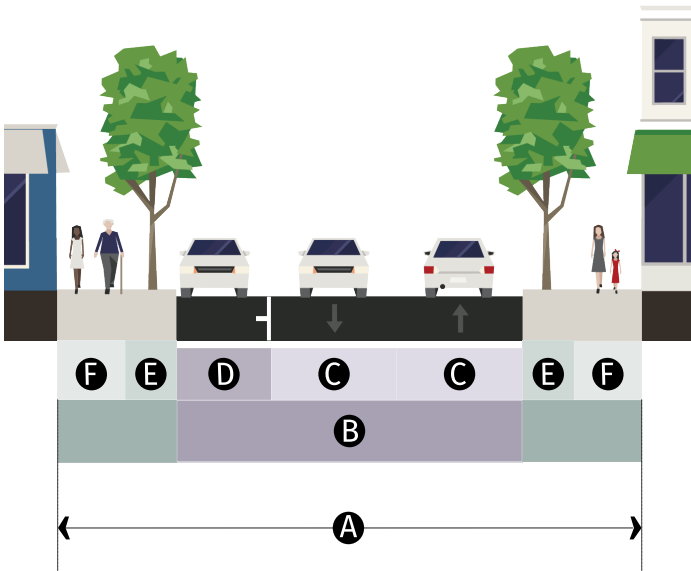
- A. Main Street Streetscape.** The main street streetscape (Section 3.8.1.6) is required in compliance with Section 3.8.1.1 for all existing streets in the downtown and midtown intensity zones. This manual provides alternatives specific to each street in order to maintain a consistent and coordinated streetscape along each block as redevelopment occurs on a lot by lot basis.
- B. Reduction in Lane Widths.** At no time shall the installation of improvements in the street edge zone reduce existing lane widths beyond the following minimum requirements.

LANE TYPE	RECOMMENDED	CONSTRAINED	NOTES
OUTSIDE TRAVEL LANE	12.5'	12'	Includes all lanes directly adjacent to a curb. Measured from face of curb to center of stripe.
INTERIOR TRAVEL LANE	11'	10'	Measurements from center of stripe to center of stripe
CENTER TURN LANE	11'	10'	
MEDIAN	14'	10'	Left turn pockets may be required at intersections

Section B.4.1.4 Downtown Cross Sections

The following cross sections are to be used as guidance in making decisions about the pedestrian and bicycle street edge zones of the road way. All lane widths and Rights-of-way provided are estimated and provided for planning purposes only. Final survey quality dimensions are required to be provided when alterations to the Right-of-Way are required by this development Code or requested by the developer.



A. Pat Garrison St 46'-32'**GENERAL**

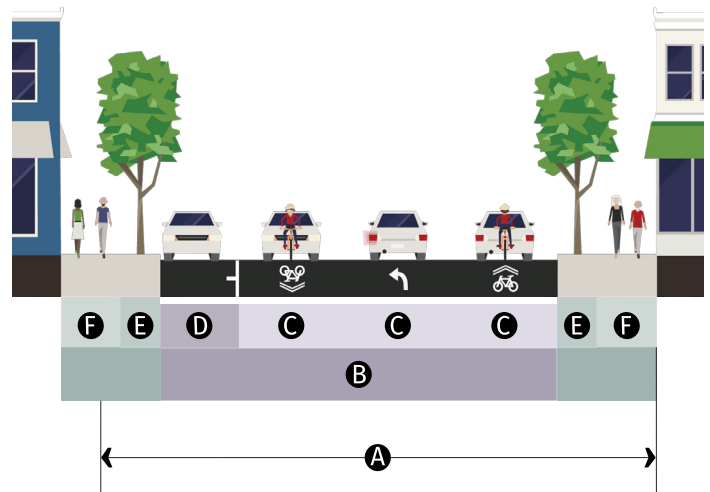
Right of Way	46'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (north side)	
Planting	Tree Grate	

TRAVELWAY

Pavement Width	33'	B
Travel Lane	10.5 - 11'	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

TRAVELWAY

Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	F

B. University Dr (CM Allen to Guadalupe St) (56'-58')-40'**GENERAL**

Right of Way	56' - 58'	A
Motorist Operating Speed	35 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (south side)	
Planting	Tree Grate/ Tree Lawn	

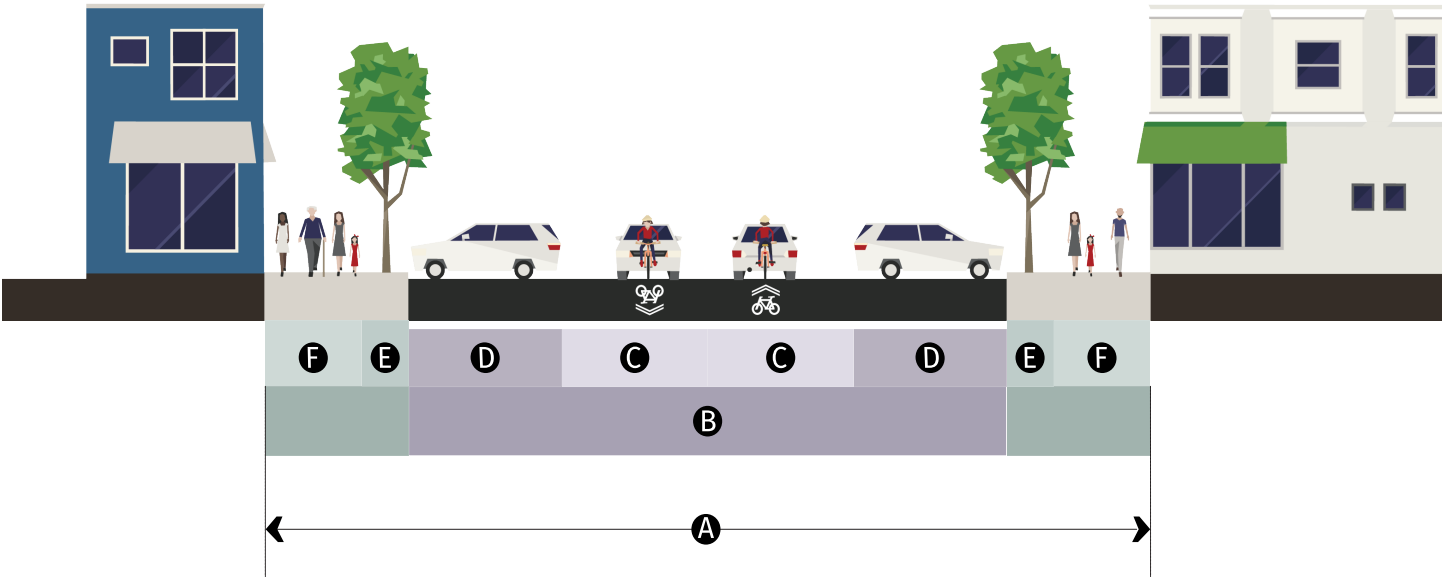
TRAVELWAY

Pavement Width	40' max	B
Travel Lane	10.5' max; 11' max turn lane	C
Parking Lane	8' (south side)	D
Traffic Lanes	3 lanes (middle turn lane)	

TRAVELWAY

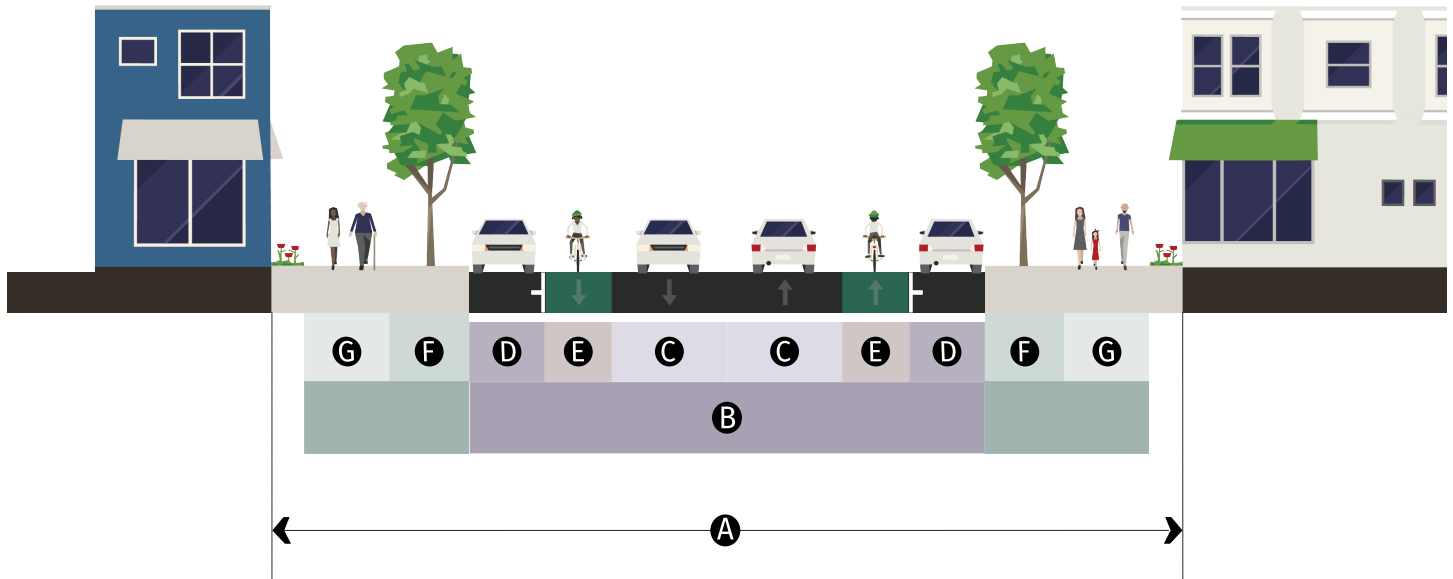
Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' - 10' min	F

C. San Antonio St (CM Allen to Harvey St) (80-94')-(54-58')



GENERAL		
Right of Way	80' - 94'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Marked Angle (both sides)	
Planting	Tree Grate/ Tree Lawn	
TRAVELWAY		
Pavement Width	54' - 58' max	B
Travel Lane	10.5' max	C
Parking Lane	16.5' - 18' max (both sides marked angle)	D
Traffic Lanes	2 lanes	
STREETSCAPE		
Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' - 9' min	F

D. MLK Dr 83-(47'-50')

**GENERAL**

Right of Way	83'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane	
Parking	Parallel (both sides)	
Planting	Tree Grate/ Tree Lawn	

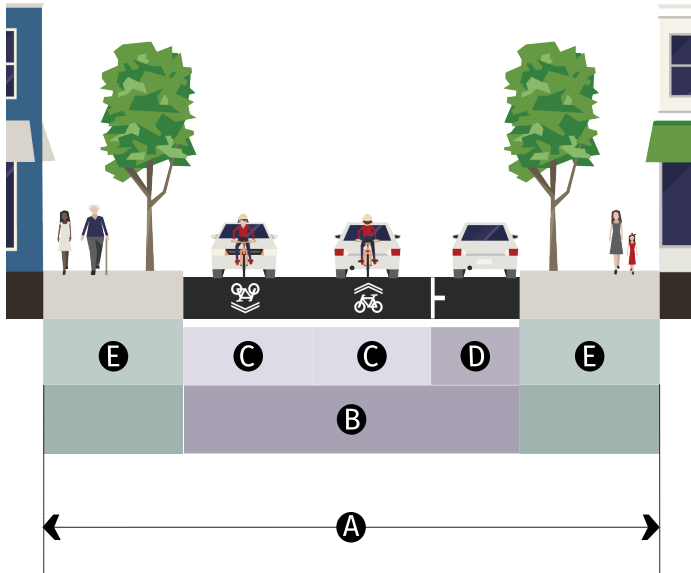
TRAVELWAY

Pavement Width	47' - 50' max	B
Travel Lane	10.5' - 11' max	C
Parking Lane	7' - 8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Bike Lane	5.5' - 6' min	E
Planter	7' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	8' min	G

E. Cheatham St (Guadalupe to LBJ) (42'-55')-30'



GENERAL

Right of Way	42' - 55'	A
Motorist Operating Speed	20 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (south side)	
Planting	Tree Grate/ Tree Lawn	

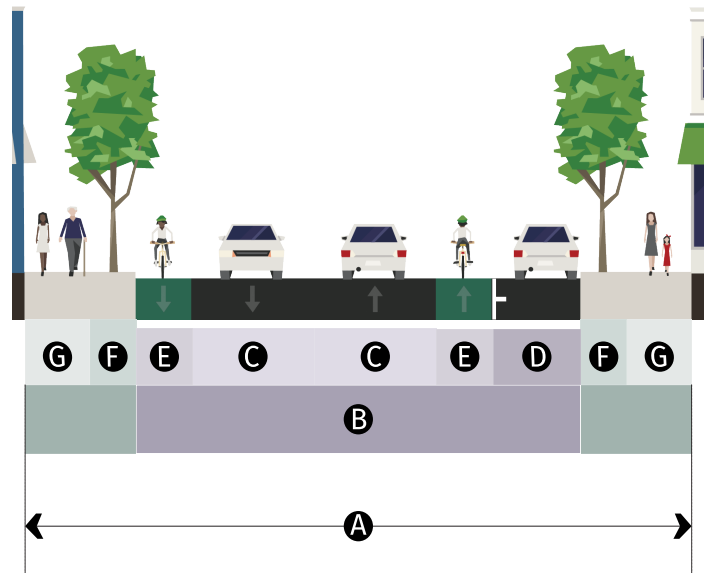
TRAVELWAY

Pavement Width	30' max	B
Travel Lane	11' max	C
Parking Lane	8' max (south side)	D
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4-7' min	
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

F. Cheatham St (S LBJ to CM Allen) 60'-(40-44')



GENERAL

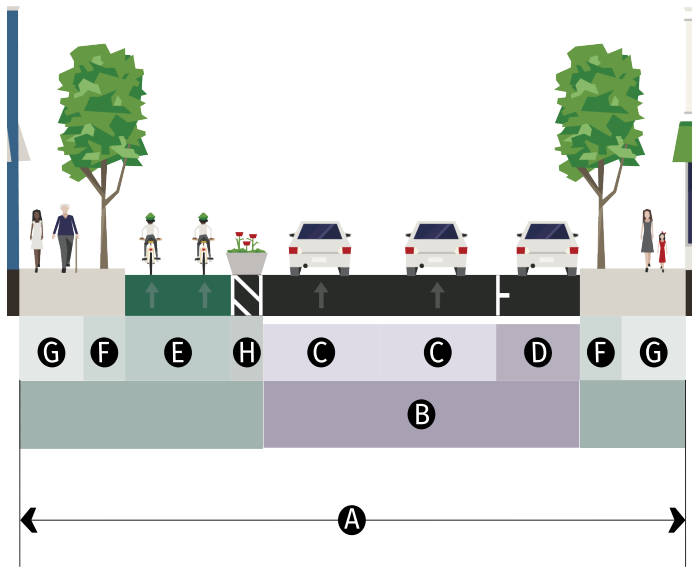
Right of Way	60'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane	
Parking	Parallel (south side)	
Planting	Tree Grate/ Tree Lawn	

TRAVELWAY

Pavement Width	40 - 44' max	B
Travel Lane	11-12' max	C
Parking Lane	8' max (south side)	D
Traffic Lanes	2 lanes	

STREETSCAPE

Bike Lane	5'-6' min	E
Planter	4' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	G

G. Grove St (Guadalupe to LBJ) 55'-36'**GENERAL**

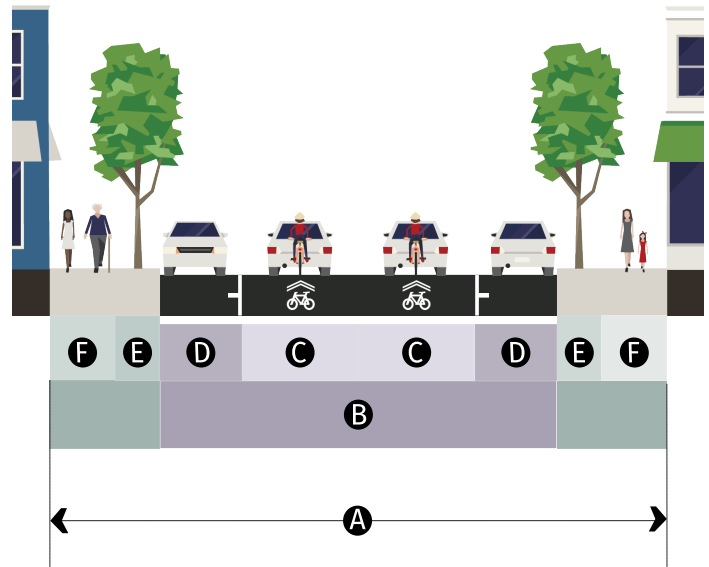
Right of Way	55' - 63'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (2-way north side)	
Parking	Parallel (south side)	
Planting	Tree Grate/ Tree Lawn	

TRAVELWAY

Pavement Width	30 - 34' max	B
Travel Lane	11 - 13' max	C
Parking Lane	8' max (south side)	D
Traffic Lanes	2 lanes (one way)	

STREETSCAPE

Bike Lane	10' (5' each lane) min	E
Planter	4' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	G
Buffer	3' min	H

H. Grove St (Hull to Guadalupe; LBJ to McKie) (55'-56')-(34'-36')**GENERAL**

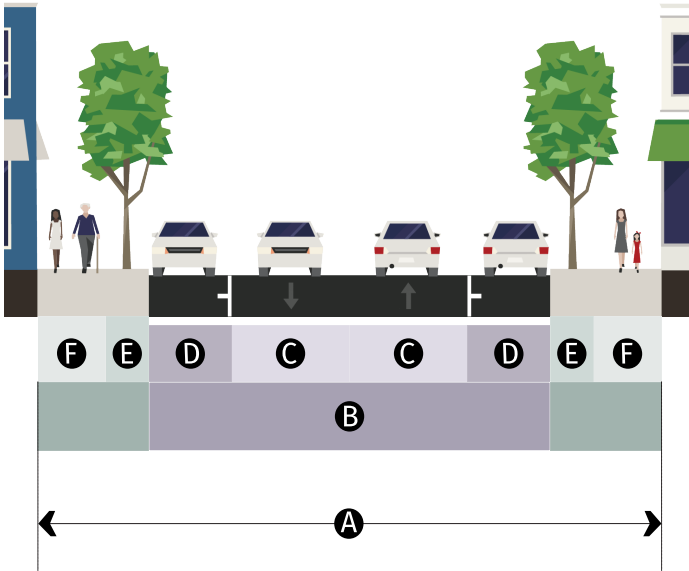
Right of Way	55' - 56'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (both sides)	
Planting	Tree Grate/ Tree Lawn	

TRAVELWAY

Pavement Width	34 - 36' max	B
Travel Lane	10.5' max	C
Parking Lane	7.5 max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' max	F

I. Lee St (Guadalupe to McKie) 56'-36'**GENERAL**

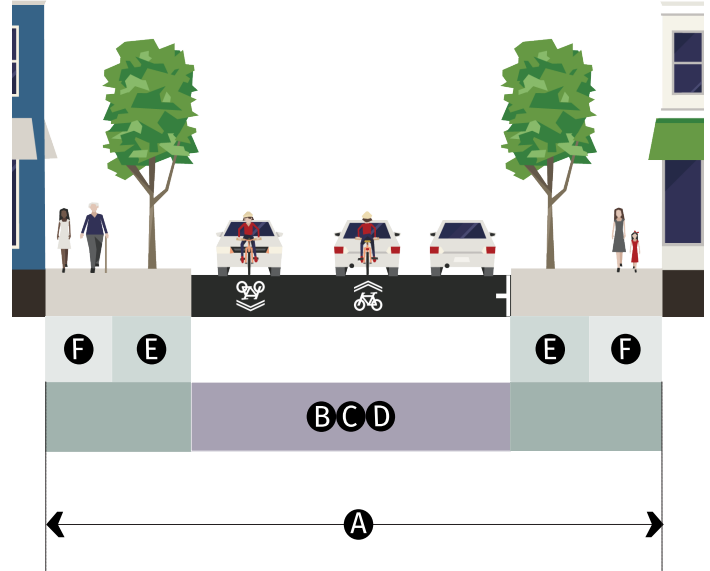
Right of Way	56'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (both sides)	
Planting	Tree Grate/ Tree Lawn	

TRAVELWAY

Pavement Width	36' max	B
Travel Lane	10.5' max	C
Parking Lane	7.5' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	F

J. Love St / Roosevelt St 55'-28'**GENERAL**

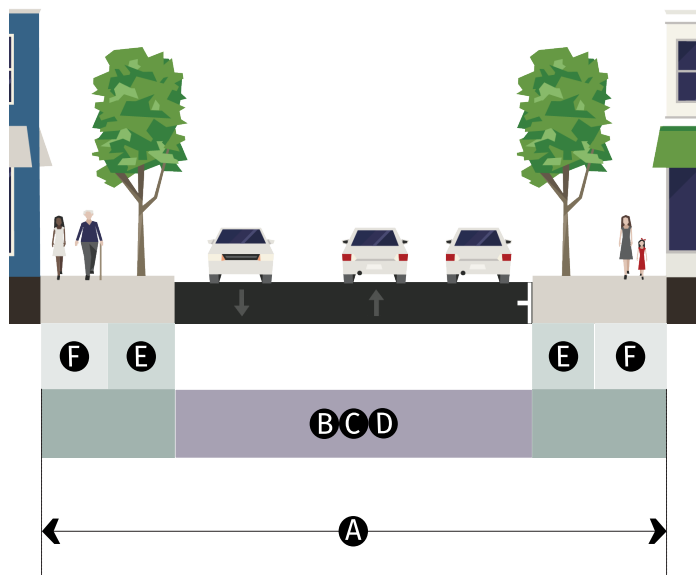
Right of Way	55'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (both sides undesignated)	
Planting	Tree Lawn	

TRAVELWAY

Pavement Width	28' max	B
Travel Lane	Undesignated (Yield)	C
Parking Lane	Undesignated	D
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	7' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	F

K. North St (Hutchison St to Hopkins St) 56'-32'**GENERAL**

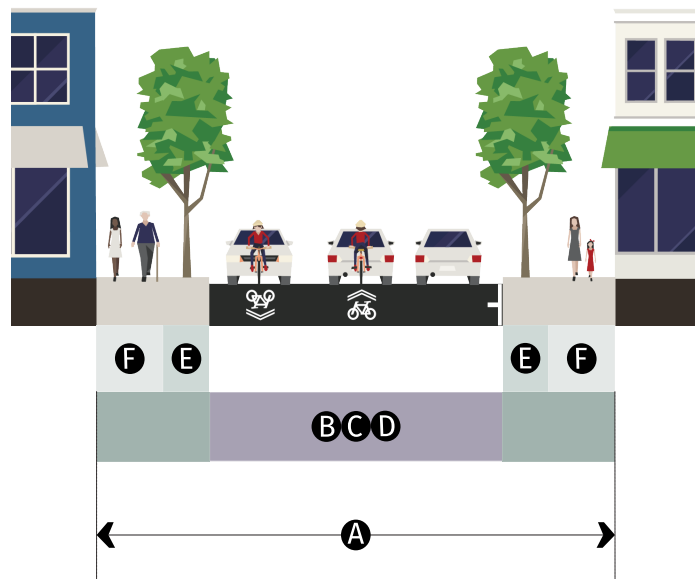
Right of Way	56'	(A)
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (both sides undesignated)	
Planting	Tree Grate/ Tree Lawn	

TRAVELWAY

Pavement Width	32' max	(B)
Yield Lane	Undesignated (Yield)	(C)
Parking Lane	Undesignated	(D)
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4 - 6' min	(E)
Tree Spacing	30' o.c. avg	
Sidewalk	6 - 10' min	(F)

L. North St (Hopkins St to Harvey St) 46'-26'**GENERAL**

Right of Way	46'	(A)
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (one side undesignated)	
Planting	Tree Grate/ Tree Lawn	

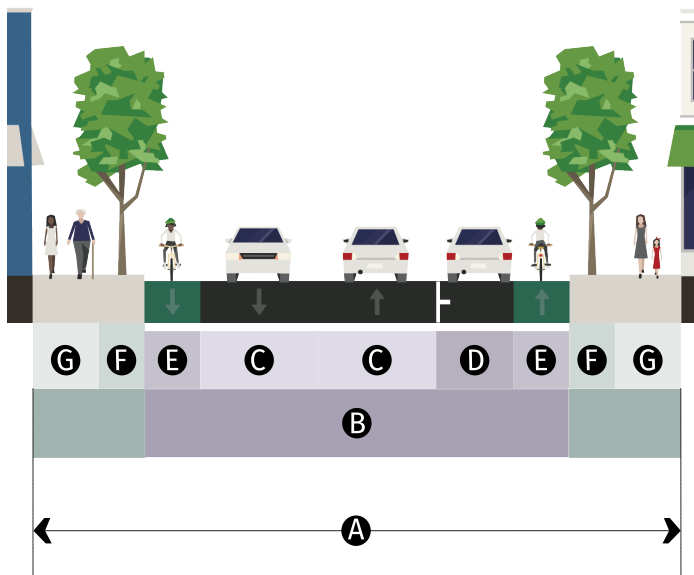
TRAVELWAY

Pavement Width	26- 29' max	(B)
Yield Lane	N/A	(C)
Parking Lane	N/A	(D)
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	(E)
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	(F)

M. Comanche St (North of Hutchison) 58'-38'



GENERAL

Right of Way	58'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane	
Parking	East side at 7' marked	
Planting	Tree Grate/ Tree Lawn	

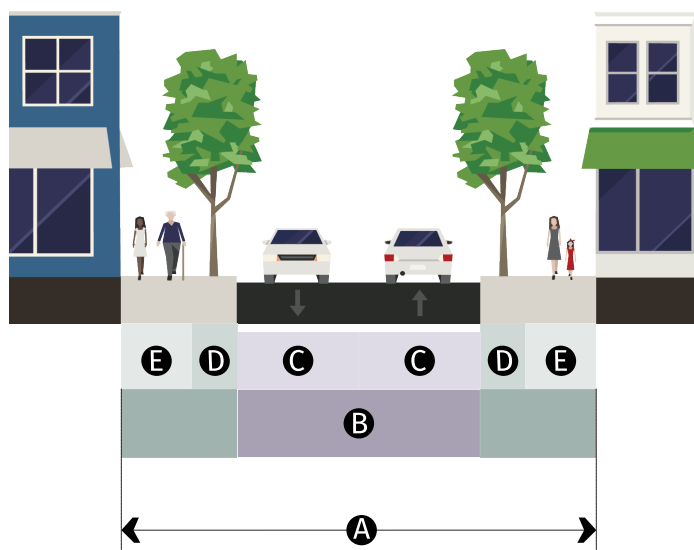
TRAVELWAY

Pavement Width	25' min - 38' max	B
Travel Lane	10.5' max	C
Parking Lane	7' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Bike Lane	5' min	E
Planter	4' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	G

N. Fredricksburg St (Lindsey to Hutchison St) 40'-42' (Hutchison to MLK Dr) 21'-24'



GENERAL

Right of Way	40' - 42' / 21'-24'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared ROW	
Parking	N/A / Alternating	
Planting	Tree Grate/ Tree Lawn	

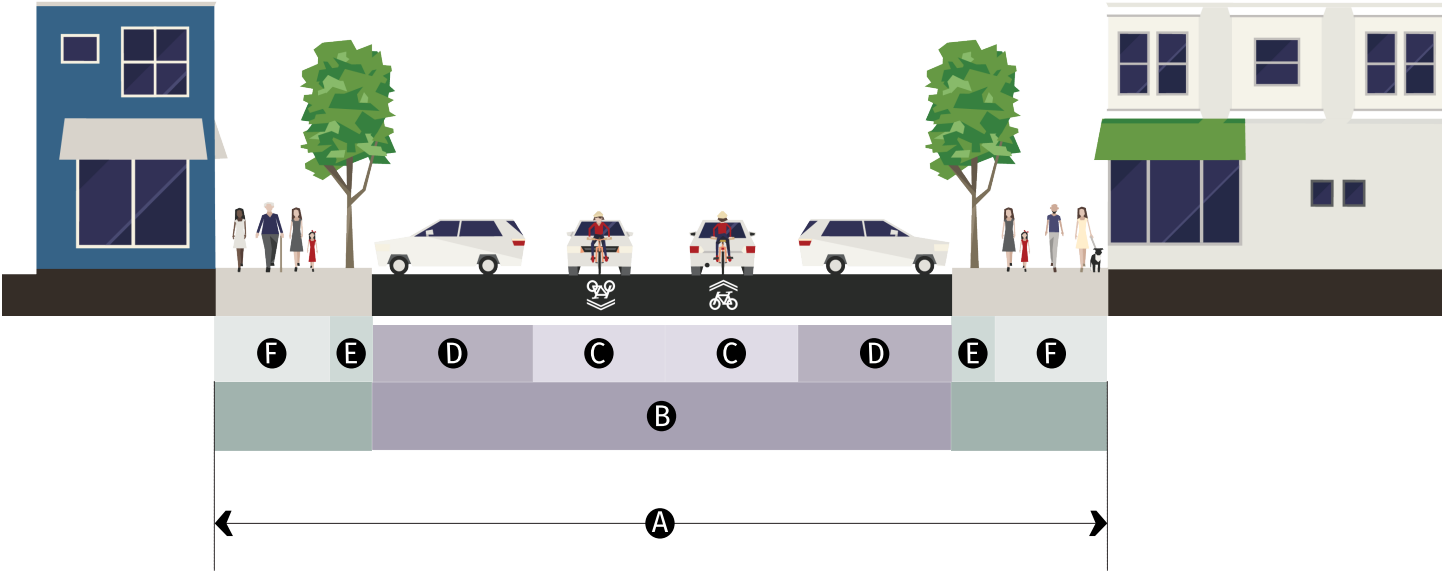
TRAVELWAY

Pavement Width	21' - 24' max	B
Travel Lane	10.5' - 12' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes / Shared ROW	

STREETSCAPE

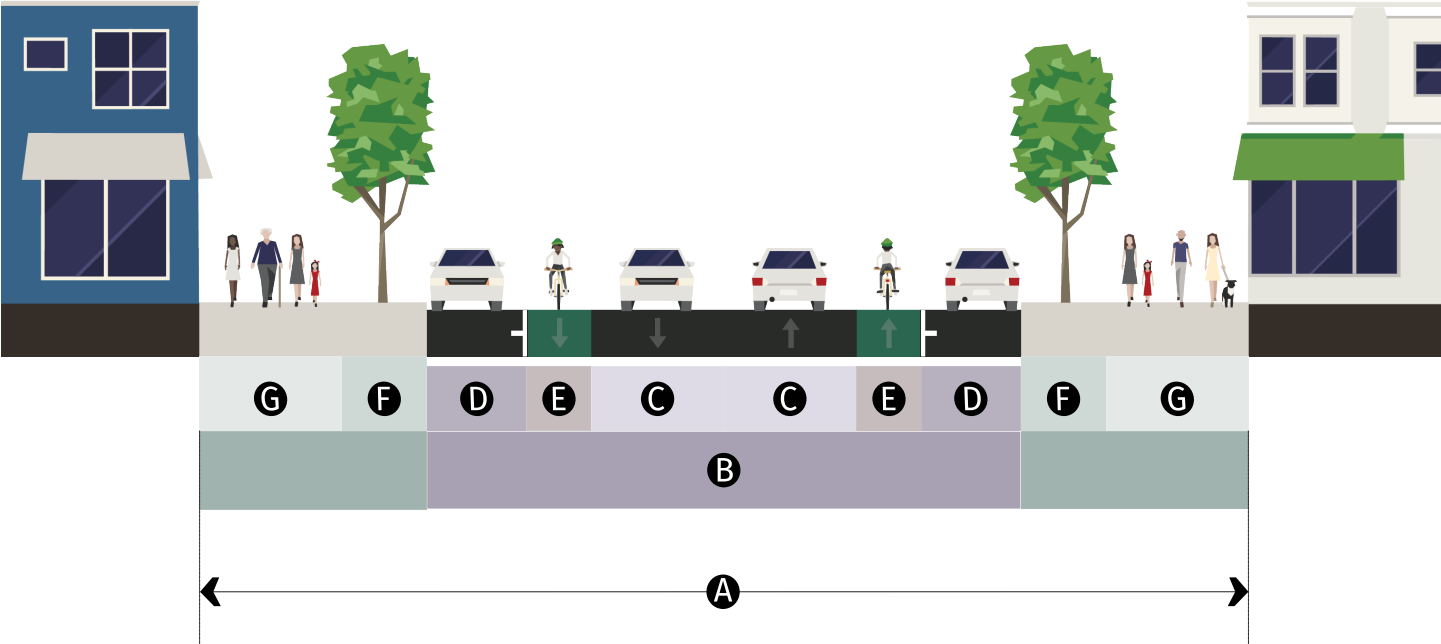
Planter	4' min / Shared Travel Lane	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min / Shared ROW	E

O. Edward Gary St (University to San Antonio) 80'-(52'-58')



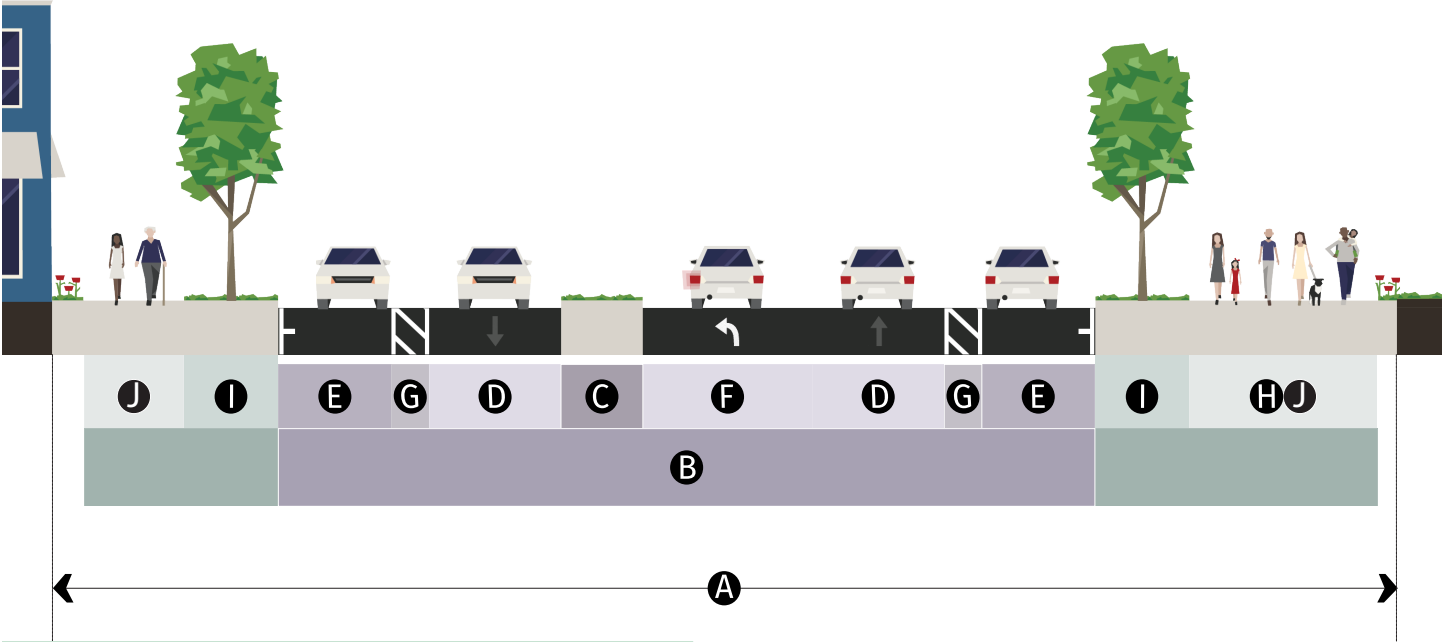
GENERAL		
Right of Way	80'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Angled (both sides)	
Planting	Tree Grate	
TRAVELWAY		
Pavement Width	52' - 55' max	B
Travel Lane	10.5' - 12' max	C
Parking Lane	15.5' - 17' max	D
Traffic Lanes	2 lanes	
STREETSCAPE		
Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	10' min	F

P. Edward Gary St (MLK to San Antonio) 83'-(48-57')



GENERAL		
Right of Way	83' - 86	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (both sides)	
Parking	Parallel (both sides)	
Planting	Tree Grate	
TRAVELWAY		
Pavement Width	48' - 57' max	B
Travel Lane	10.5 - 11' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	
STREETSCAPE		
Bike Lane	5' min	E
Planter	7' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	10-11' min	G

Q. CM Allen Pkwy (University to San Antonio) 107'-68'



GENERAL

Right of Way	107'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk / Multi-Use path	
Bikeway	Multi-Use Path	
Parking	Parallel (both sides)	
Planting	Tree Lawn/ Median	

TRAVELWAY

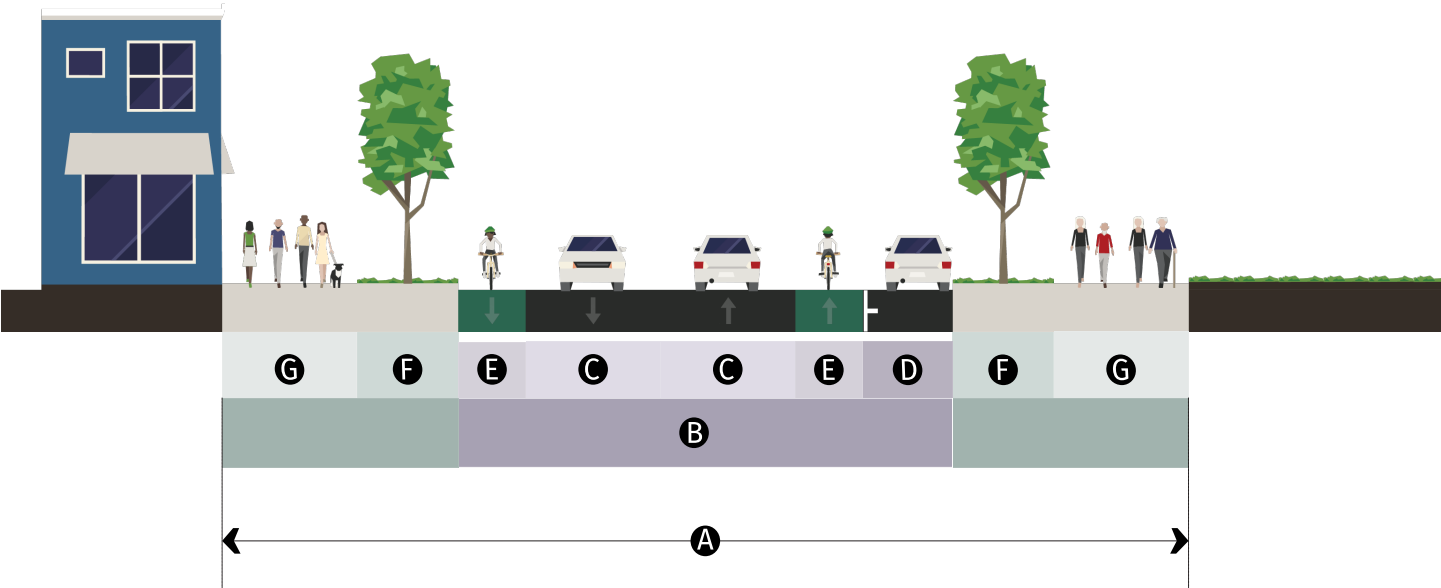
Pavement Width	65'	B
Median	6.5' - 20' min (Planted)	C
Travel Lane	10.5' min	D
Parking Lane	9'	E
Turn Lane	13.5' min (staggered)	F
Parking Buffer	3' min	G
Traffic Lanes	2 lanes; Staggered Center Turn	

STREETSCAPE

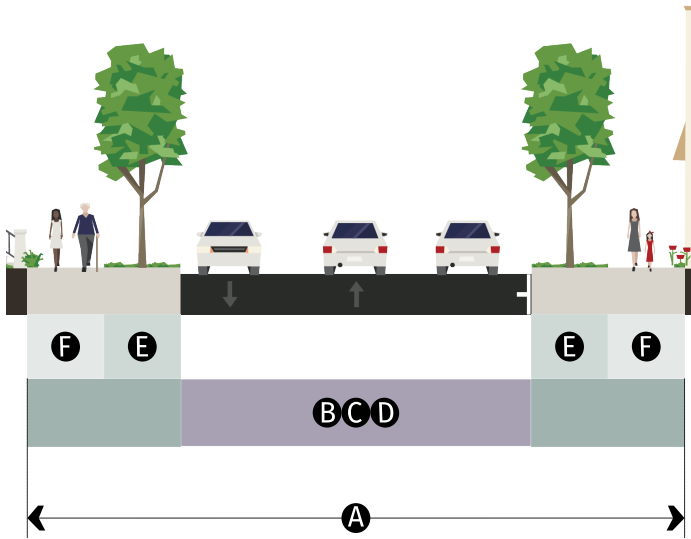
Cycle Track / Multi-Use	15' min (east side)	H
Planter	7.5' min, 3' buffer	I

Tree Spacing	30' o.c. avg	
Sidewalk	8' min	J
Note: Potential reconfiguration of parking to traffic lanes		

R. CM Allen Pkwy (San Antonio to Cheatham) 86'-42'



GENERAL		
Right of Way	86'	A
Motorist Operating Speed	35 mph	
Walkway	Sldewalk	
Bikeway	Bike Lane (both sides)	
Parking	Parallel (east side)	
Planting	Tree Lawn	
TRAVELWAY		
Pavement Width	42' max	B
Travel Lane	12' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	
STREETSCAPE		
Cycle Track	6' min	E
Planter	8-10' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	12' (both sides)	G

S. Harvey St (North to San Antonio St) 60'-32'**GENERAL**

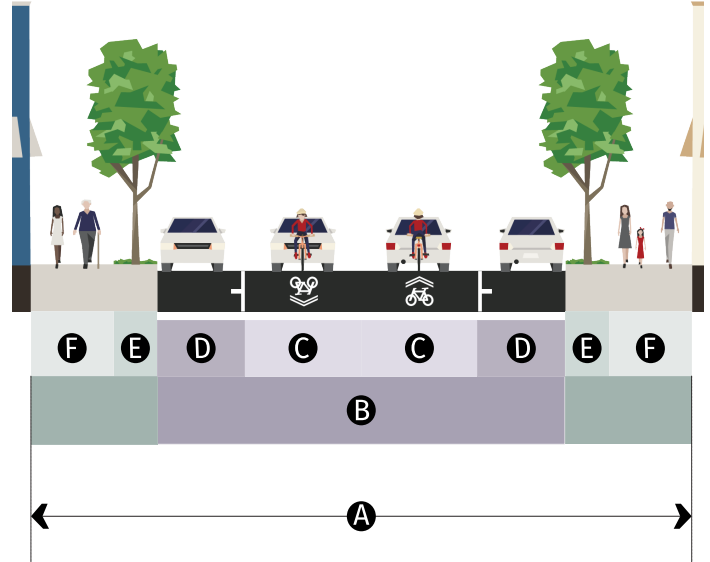
Right of Way	60'	(A)
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (both sides undesignated)	
Planting	Continuous	

TRAVELWAY

Pavement Width	32' max	(B)
Travel Lane	N/A	(C)
Parking Lane	N/A	(D)
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	7' min	(E)
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	(F)

T. Hutchison St (North to Guadalupe) 60'-40'**GENERAL**

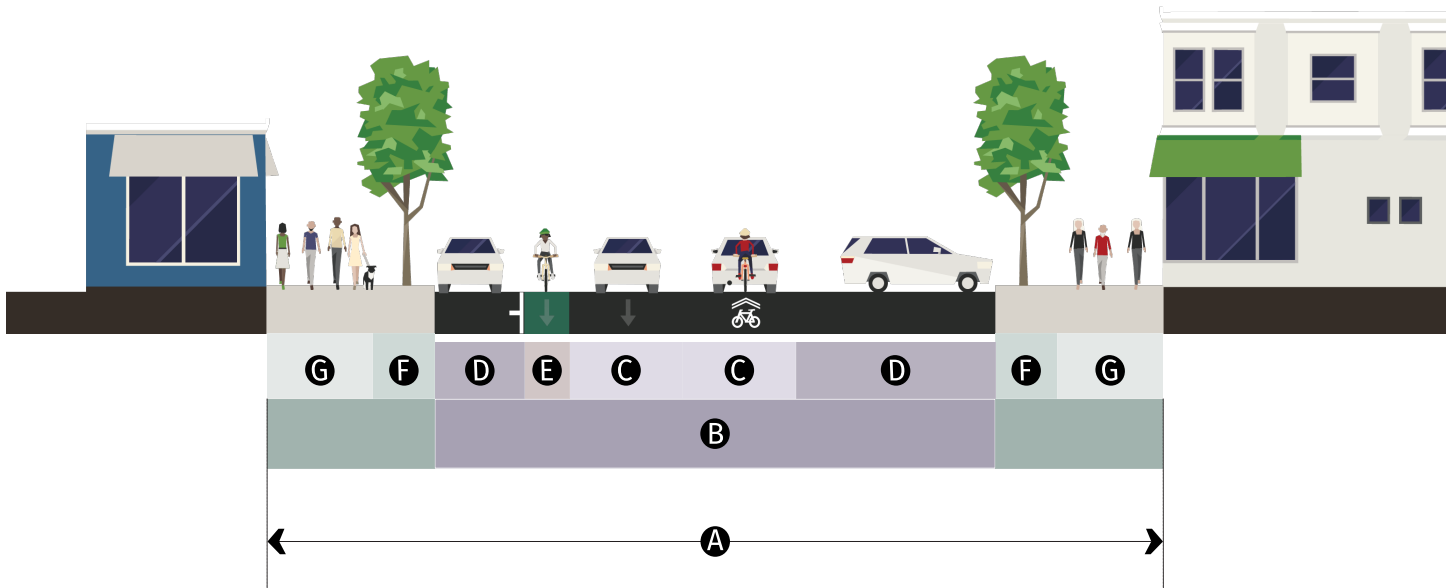
Right of Way	60'	(A)
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (both sides) *Angled where space permits	
Planting	Tree Grate	

TRAVELWAY

Pavement Width	40' max	(B)
Travel Lane	10.5' - 11' max	(C)
Parking Lane	8' max	(D)
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	(E)
Tree Spacing	30' o.c. avg	
Sidewalk	10 - 12' min	(F)

U. Hutchison St (Guadalupe to N CM Allen) (60-80')-(50-56')**GENERAL**

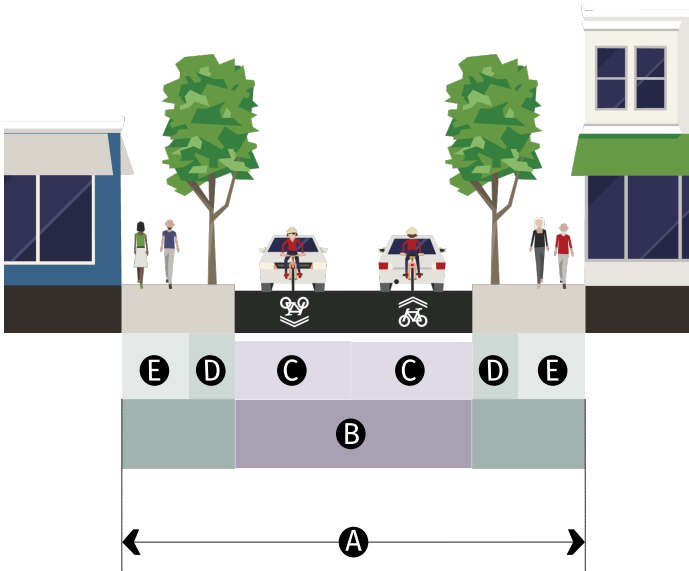
Right of Way	60 - 80'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane / Shared Travel Lane	
Parking	Marked angle (south side); Parallel (north side)	
Planting	Tree Grate/ Tree Lawn	

TRAVELWAY

Pavement Width	50 - 56' max	B
Travel Lane	10.5 - 11' max	C
Parking Lane	17' max; 8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	4'; Shared Travel Lane (south side)	E
Planter	5' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	10 - 13.5' min	G

V. Comanche St (Hutchison to MLK) 41'-21'**GENERAL**

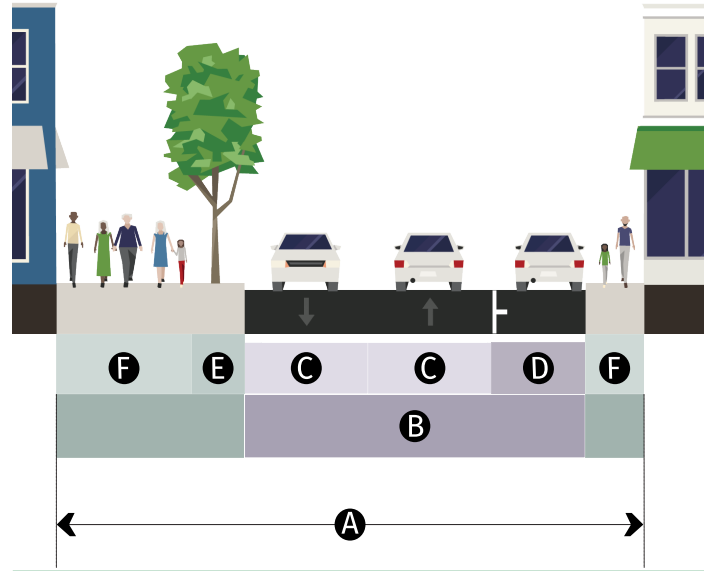
Right of Way	41'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	21' max	B
Travel Lane	10.5' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

W. Concho St (50-54')-30'**GENERAL**

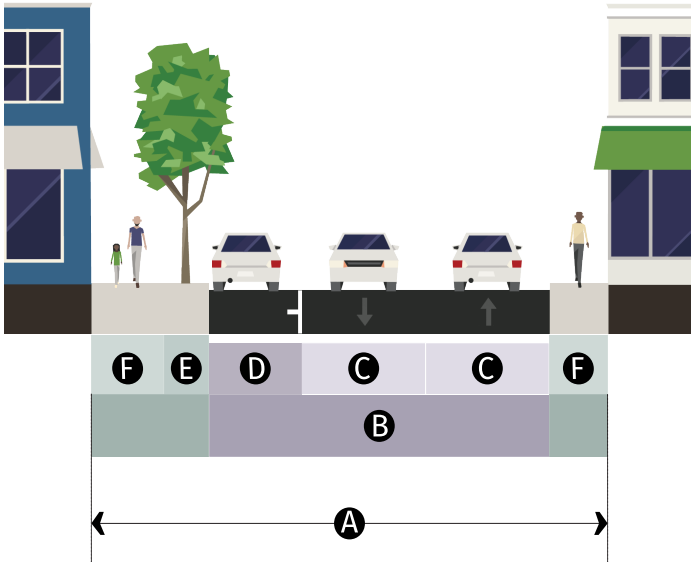
Right of Way	50 - 54'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (north side)	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	30' max	B
Travel Lane	11' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	N/A	
Planter	5' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	5' / 11' min	F

X. Lindsey St (40'-44')-30'**GENERAL**

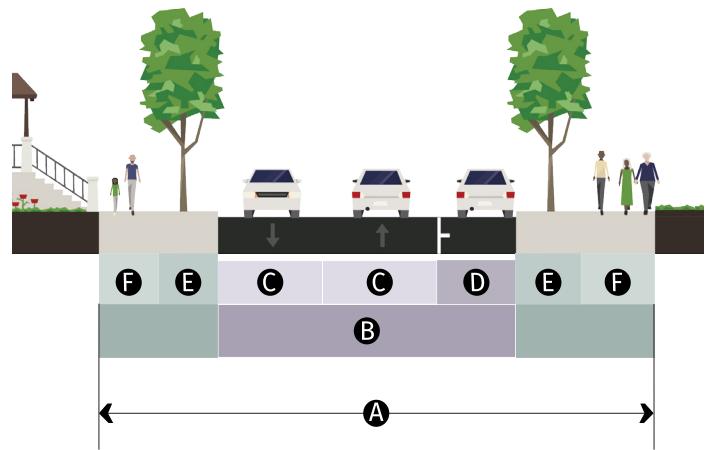
Right of Way	40' - 44'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (south side)	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	30' max	B
Travel Lane	10.5' - 11' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	N/A	
Planter	4' (one side)	E
Tree Spacing	30' o.c. avg	
Sidewalk	5' (north side) / 6' min (south side)	F

Y. Centre St (56'-75')-30'**GENERAL**

Right of Way	56' - 75'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (north side)	
Planting	Tree Grate / Tree Lawn	

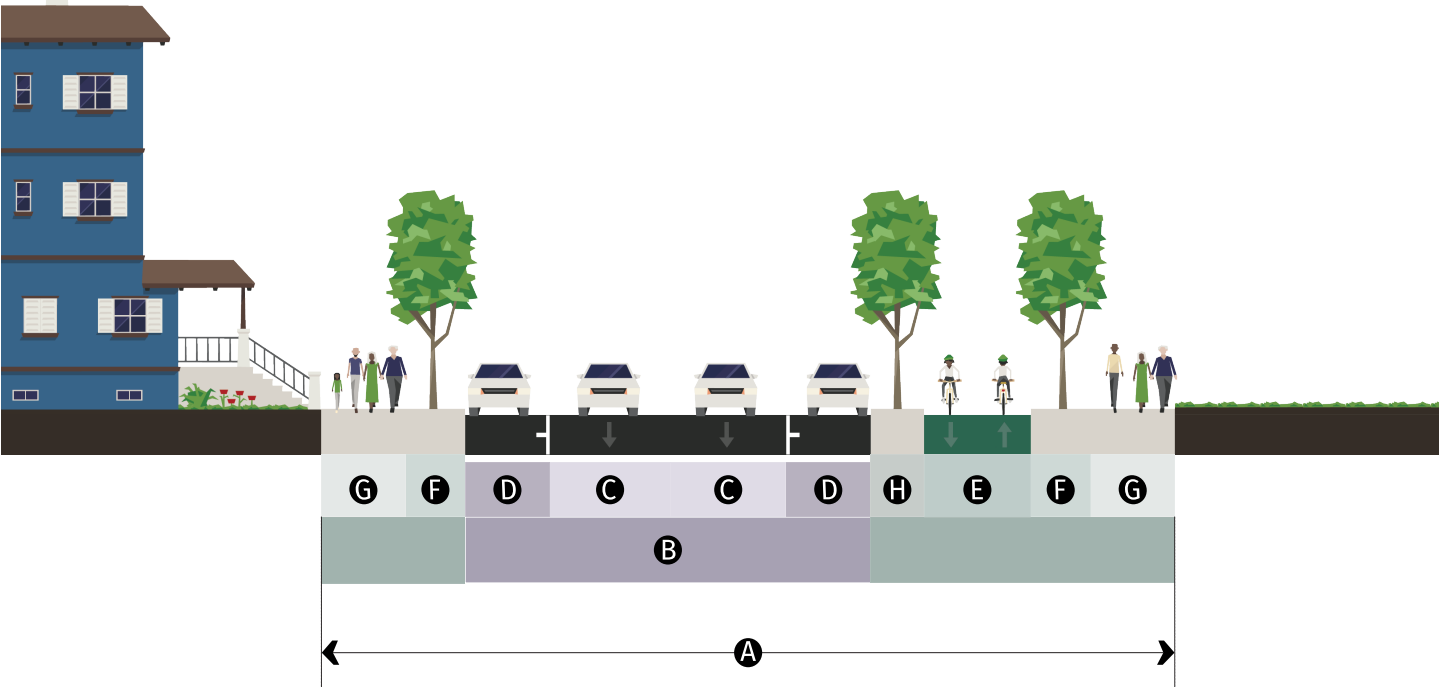
TRAVELWAY

Pavement Width	30' max	B
Travel Lane	10.5' - 11' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	N/A	
Planter	7' min	E
Tree Spacing	30' o.c.	
Sidewalk	5' min (south side) / 7' min (north side)	F

Z. Guadalupe St 80'-38'



GENERAL

Right of Way	80'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (2-way west side)	
Parking	Parallel (Both sides)	
Planting	Tree Grate / Tree Lawn and Tree Buffer	

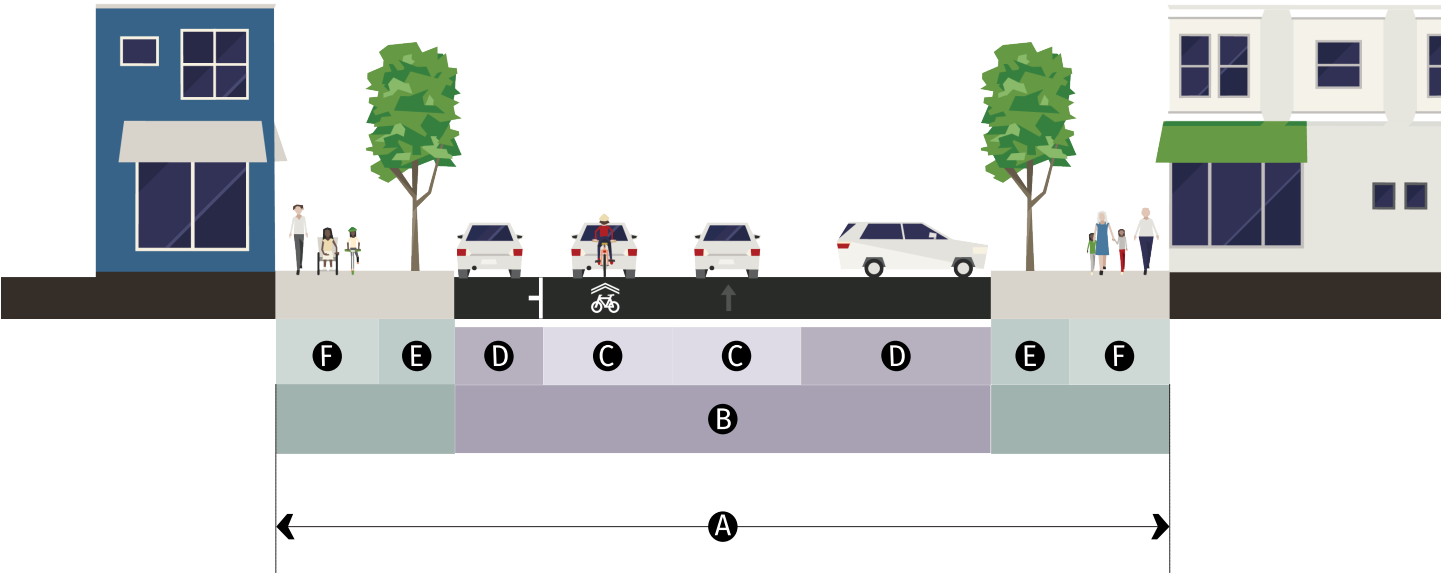
TRAVELWAY

Pavement Width	38' max	B
Travel Lane	11' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

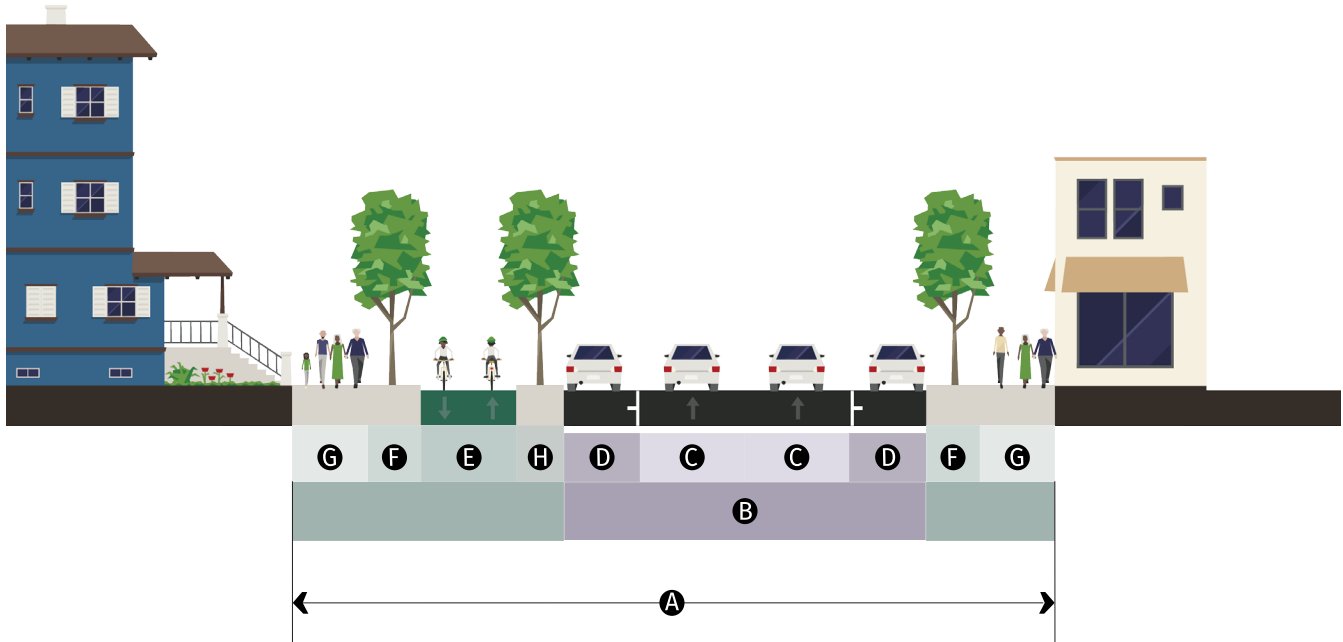
Cycle Track	10' (5' each lane)	E
Planter	6' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	7.5' min	G
Buffer	5' min	H

AA. LBJ St (MLK to University) 80'-48'



GENERAL		
Right of Way	80'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane (west side)	
Parking	Parallel (west side); Angled (east side)	
Planting	Tree Grate / Tree Lawn	
TRAVELWAY		
Pavement Width	48' max	B
Travel Lane	11' max	C
Parking Lane	8' max; 18' max	D
Traffic Lanes	2 lanes	
STREETSCAPE		
Cycle Track	Shared Travel Lane (west side)	
Planter	7' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	9' min	F

AB. LBJ St (IH-35 to MLK) (75-92')-38'



GENERAL

Right of Way	75 - 92'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (2-way, west side)	
Parking	Parallel (both sides)	
Planting	Tree Grate / Tree Lawn	

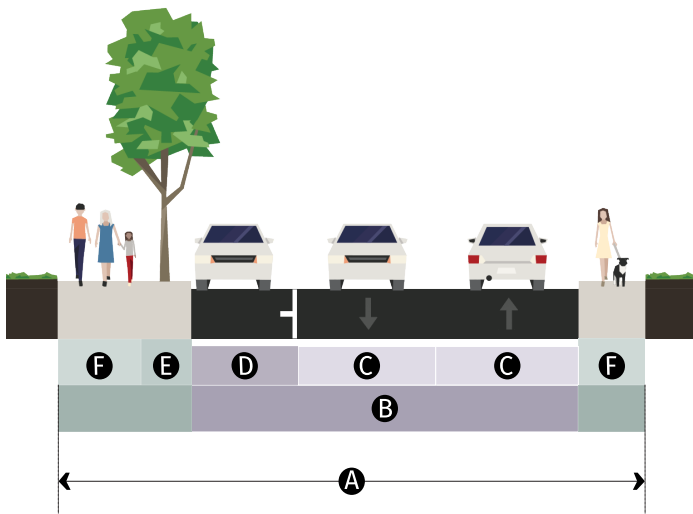
TRAVELWAY

Pavement Width	38' max	B
Travel Lane	11' max	C
Parking Lane	8' max;	D
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	10' (5' each lane)	E
Planter	6' min	F
Tree Spacing	30' o.c. avg	
Sidewalk	6 - 7.5' min	G
Buffer	3-5' min	H

AC. Armstrong St 44'-29'



GENERAL

Right of Way	44'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (north side)	
Planting	Tree Grate / Tree lawn (north side)	

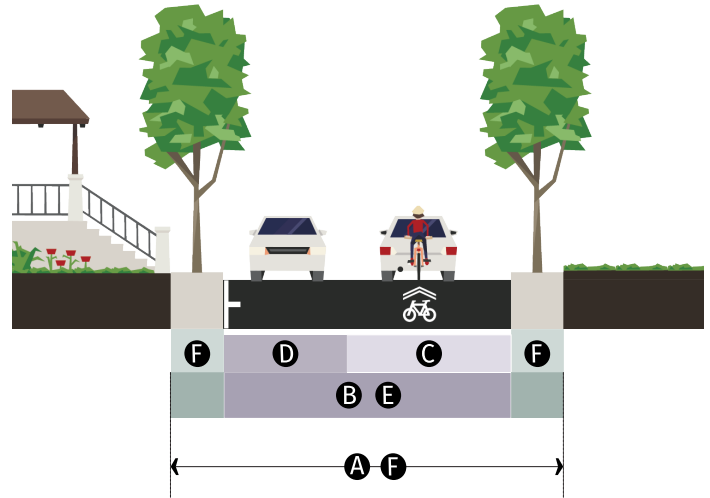
TRAVELWAY

Pavement Width	29' max	B
Travel Lane	10.5 max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	N/A	
Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' min (north side) / 5' min (south side)	F

AD. Nicola Alley (20-30')-30'



GENERAL

Right of Way	20' - 30'	A
Motorist Operating Speed	25 mph	
Walkway	Shared Right-of-Way	
Bikeway	Shared Right-of-Way	
Parking	Parallel (alternating)	
Planting	Planters (Alternating)	

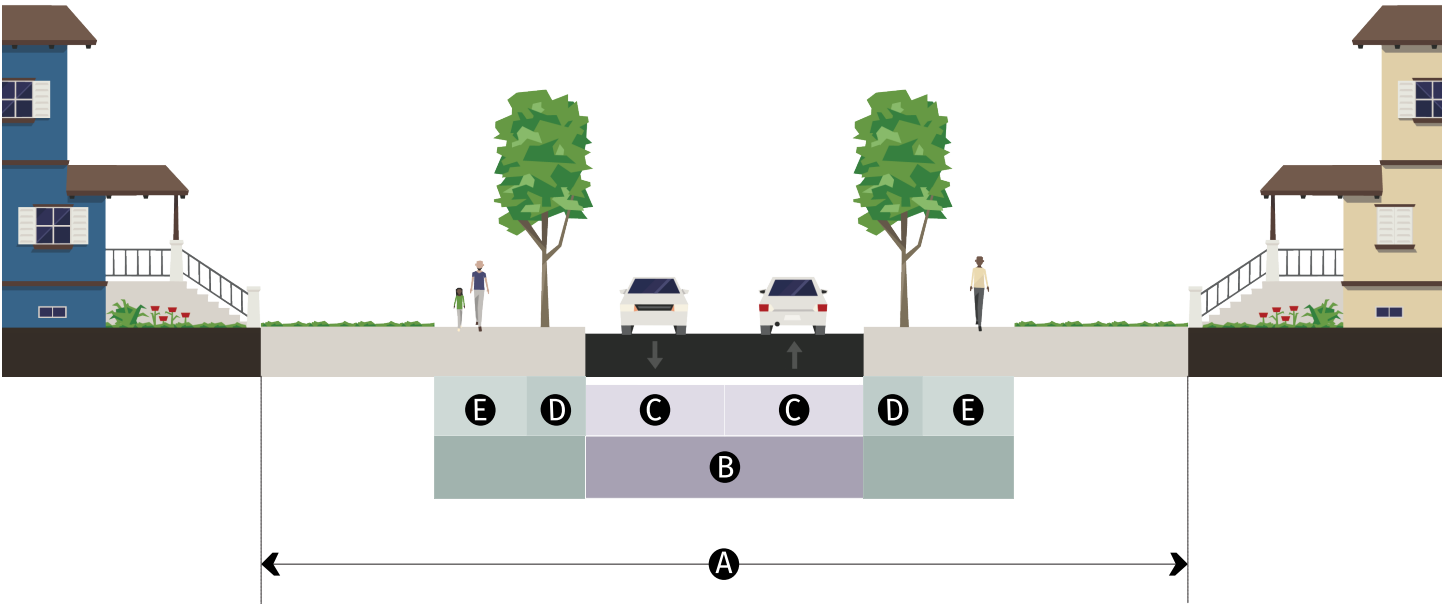
TRAVELWAY

Pavement Width	30' max	B
Travel Lane	14' max	C
Parking Lane	8' max	D
Traffic Lanes	Shared Right-of-Way	

STREETSCAPE

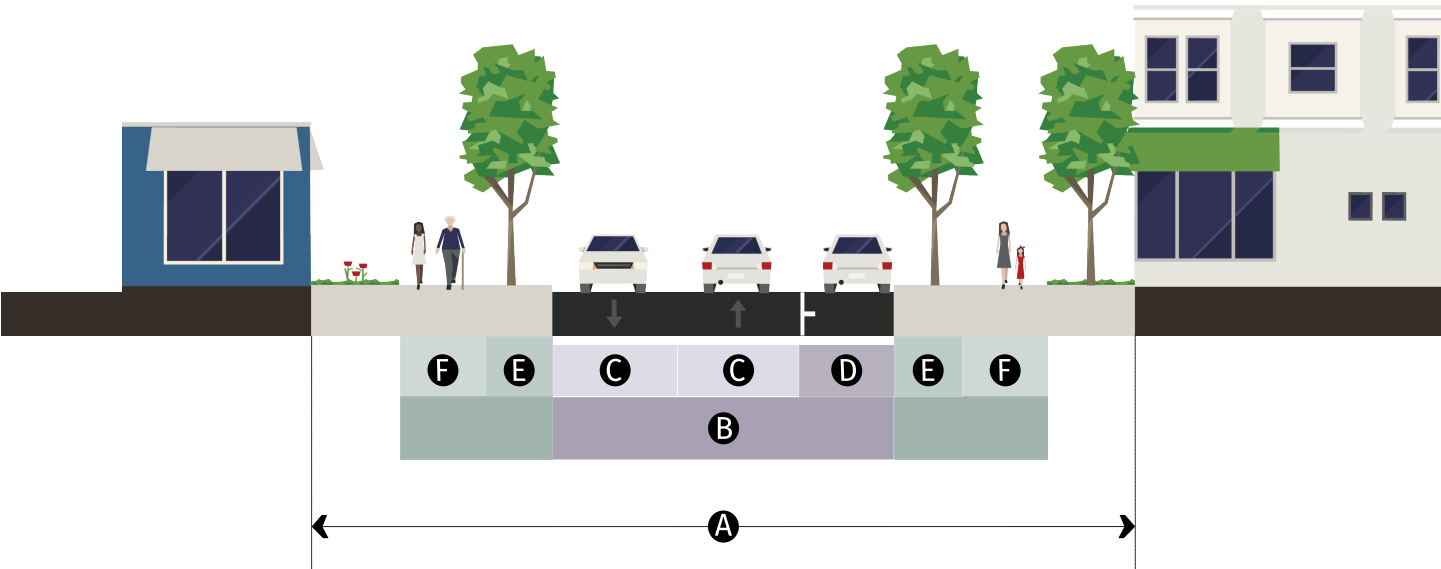
Cycle Track	Shared Travel Lane	E
Sidewalk	Shared Right-of-Way	F

AE. Porter St 80'-24'



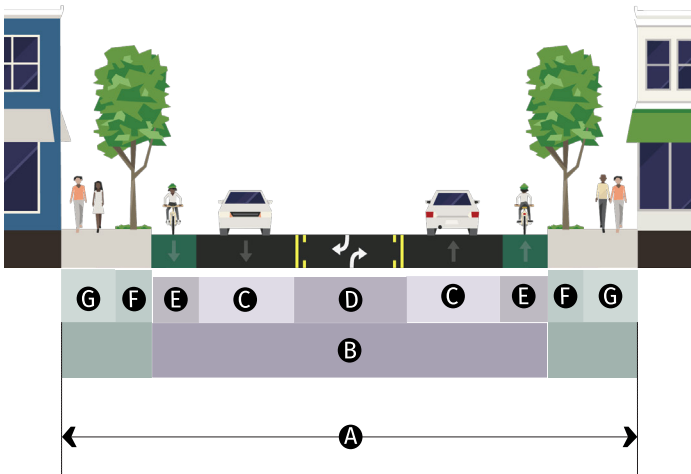
GENERAL		
Right of Way	80'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	
TRAVELWAY		
Pavement Width	24' max	B
Travel Lane	12' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	
STREETSCAPE		
Cycle Track	N/A	
Planter	7' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

AF. Comal St (70-83')-29'



GENERAL		
Right of Way	70 - 83'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (south side)	
Planting	Tree Grate / Tree Lawn	
TRAVELWAY		
Pavement Width	29' max	B
Travel Lane	10.5' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	
STREETSCAPE		
Cycle Track	N/A	
Planter	7' min	E
Tree Spacing	30 o.c. avg	
Sidewalk	6' min	F

This map illustrates the Blanco River and its surrounding area, highlighting 14 sampling locations (A-N) along the river and its tributaries. The river flows from the top right towards the bottom left, eventually joining the Blanco River. Major roads shown include Interstate 35 (I-35) and Highway 21. Local streets include Aquarena Springs Dr, Uhland Rd, and various residential streets like Spring Rd, Mill St, and West Ave. The map also shows the Blanco Shoals Natural Area and Blanco River Village. A scale bar in the bottom right corner indicates distances from 0 to 1,650 feet, and a north arrow is present.

A. Thorpe Ln (60-76')-44'**GENERAL**

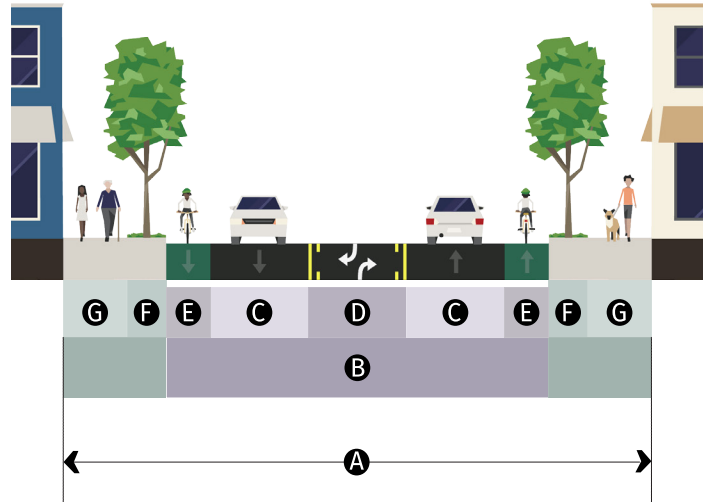
Right of Way	60-76'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (both sides)	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	44' max	B
Travel Lane	11' max	C
Parking Lane	N/A	
Turn Lane	12' max	D
Traffic Lanes	2 lanes with Center Turn	

STREETSCAPE

Cycle Track	5' min	E
Planter	4' min	F
Tree Spacing	30' o.c. avg	G
Sidewalk	6' min	G

B. Springtown Way 60'-38'**GENERAL**

Right of Way	60'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (both sides)	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

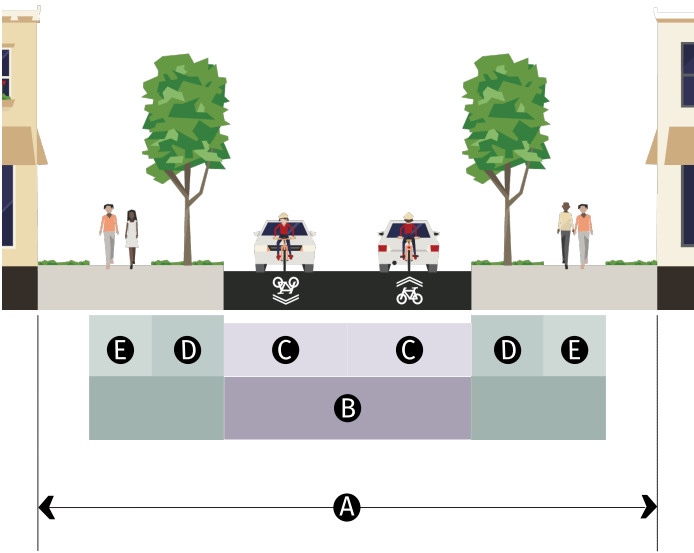
TRAVELWAY

Pavement Width	38' max	B
Travel Lane	10.5' max	C
Turn Lane	12' max	D
Parking Lane	N/A	
Traffic Lanes	2 lanes with Center Turn	

STREETSCAPE

Cycle Track	4.5' min	E
Planter	4' min	F
Tree Spacing	30' o.c. avg	G
Sidewalk	6' min	G

C. Jackson Ln (29-60')-24'



GENERAL

Right of Way	29' (proposed 60' ROW)	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

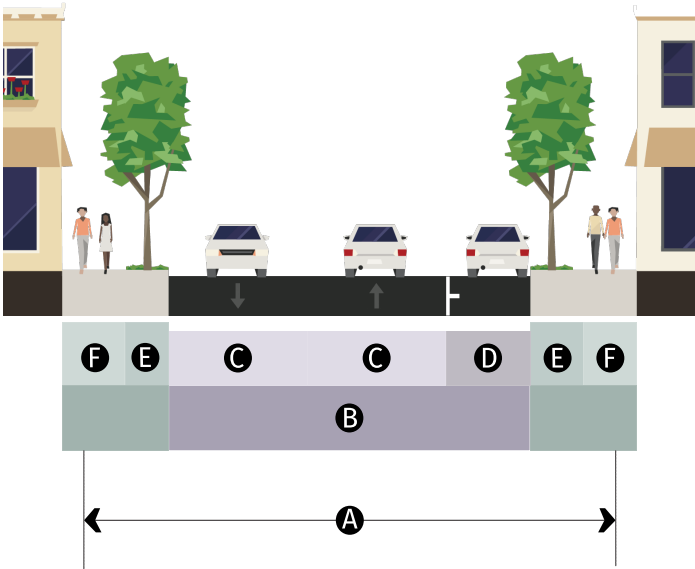
TRAVELWAY

Pavement Width	24' max	B
Travel Lane	12' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	7' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

D. Long St 60'-34'



GENERAL

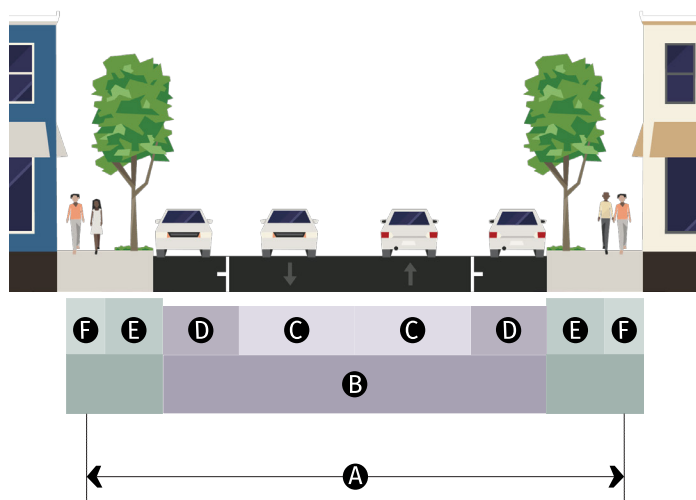
Right of Way	50'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (south side)	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	34' max	B
Travel Lane	13' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	F

E. Robbie Ln 60'-41'**GENERAL**

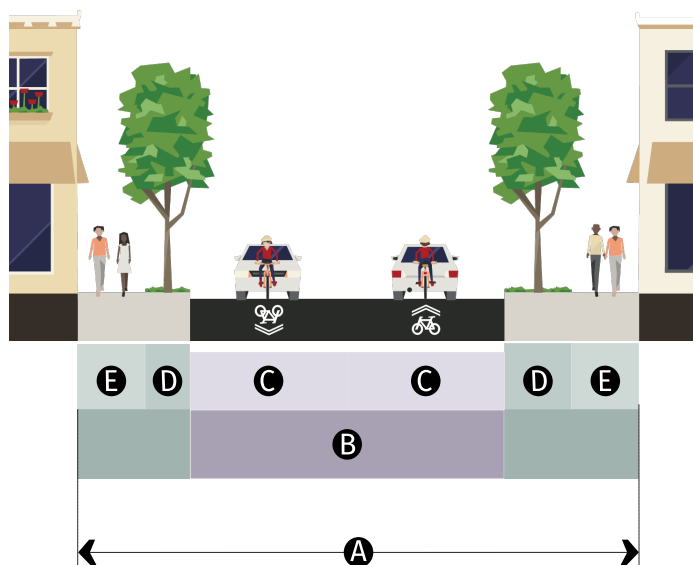
Right of Way	60'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (both sides)	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	41' max	B
Travel Lane	12.5' max	C
Parking Lane	8' max	D
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	F

F. Warden Ln 50'-28'**GENERAL**

Right of Way	50'	A
Motorist Operating Speed	40 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

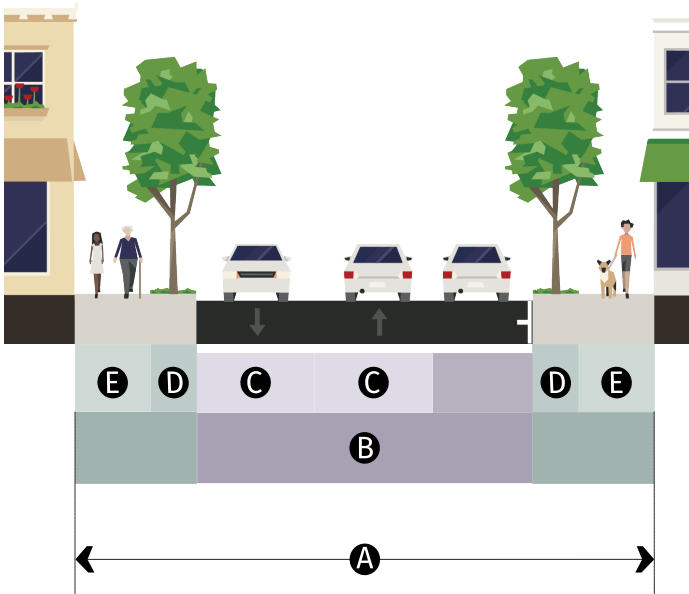
TRAVELWAY

Pavement Width	28' max	B
Travel Lane	14' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min (south side) / 6' min (north side)	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

G. Zunker St 50'-29'



GENERAL

Right of Way	50'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	Parallel (one side undesignated)	
Planting	Tree Grate / Tree Lawn	

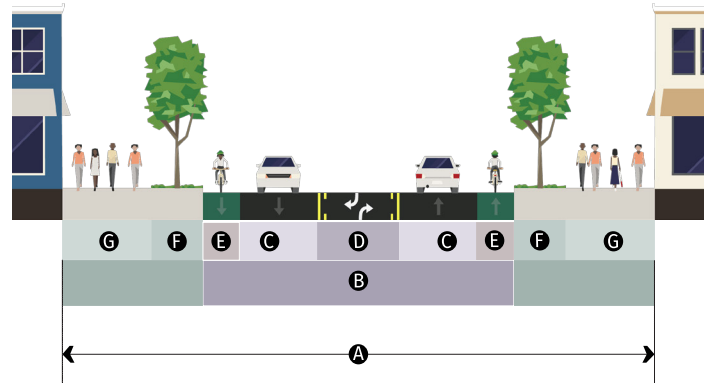
TRAVELWAY

Pavement Width	29' max	B
Travel Lane	10.5' max	C
Parking Lane	Undesignated	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

H. Aquarena Springs Dr (IH-35 to River Rd) - (60-80')-42'



GENERAL

Right of Way	60' (80' ROW proposed)	A
Motorist Operating Speed	45 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (both sides); Multi-Use Path	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

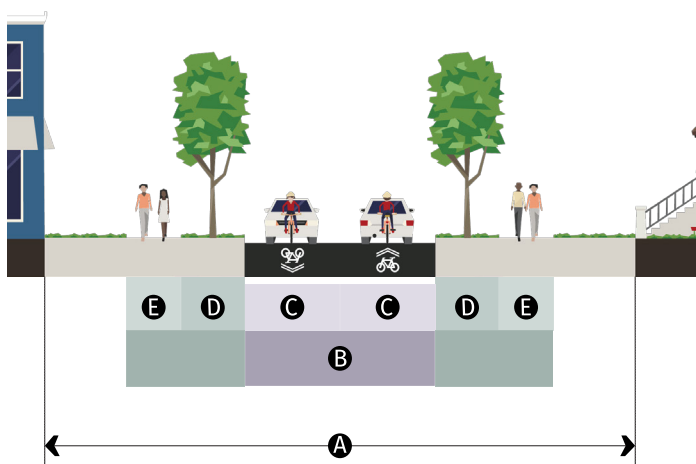
TRAVELWAY

Pavement Width	42' max	B
Travel Lane	10.5' max	C
Turn Lane	11' max	D
Parking Lane	N/A	
Traffic Lanes	2 lanes with Center Turn	

STREETSCAPE

Cycle Track	5' (both sides)	E
Planter	7' min	F
Tree Spacing	30' o.c. avg	
Sidewalk / Multi-Use Path	12' min	G

I. Uhland Rd - 65'-21'



GENERAL

Right of Way	65'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

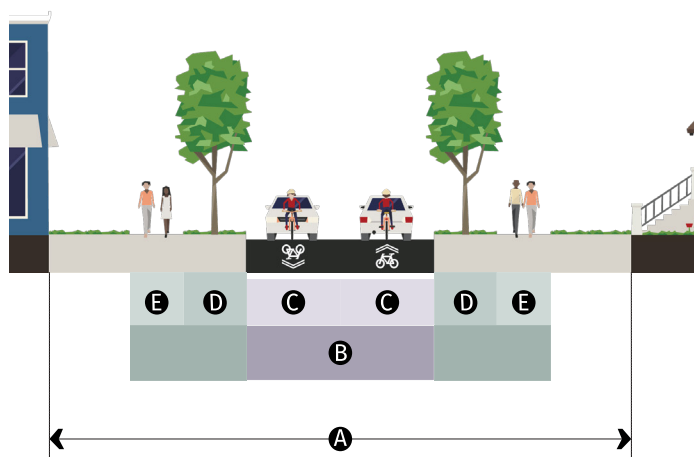
TRAVELWAY

Pavement Width	21' max	B
Travel Lane	10.5' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	7' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

J. River Rd - 60'-21'



GENERAL

Right of Way	60'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

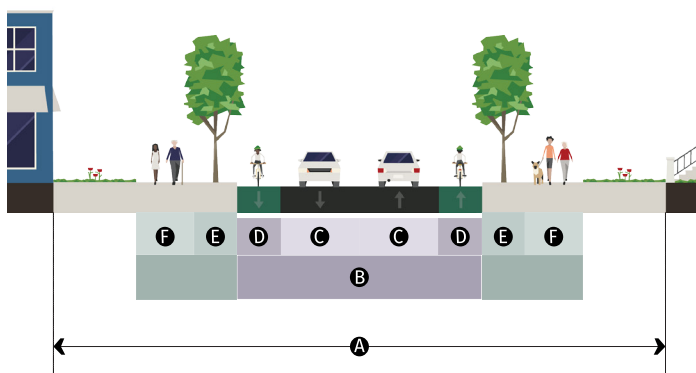
TRAVELWAY

Pavement Width	21' max	B
Travel Lane	10.5' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	7' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	E

K. Davis Ln - 85'-34'



GENERAL

Right of Way	85'	A
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane	
Parking	N/A (potential option)	
Planting	Tree Grate / Tree Lawn	

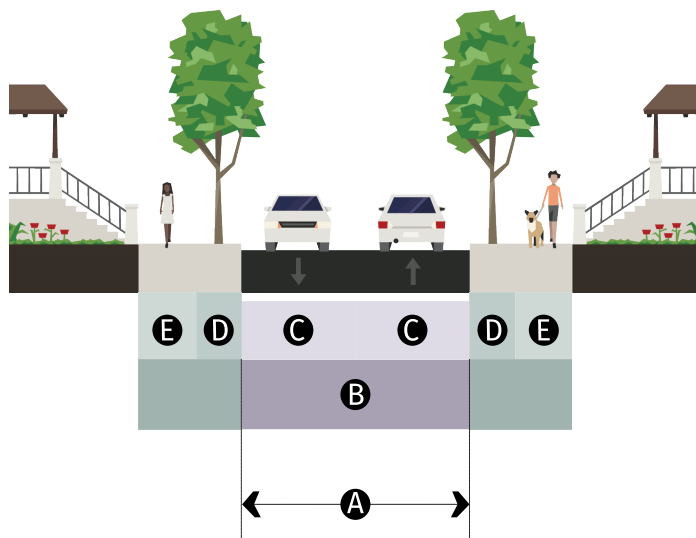
TRAVELWAY

Pavement Width	34' max	B
Travel Lane	11' max	C
Parking Lane	N/A (potential option)	
Traffic Lanes	2 lanes	

STREETSCAPE

Cycle Track	6' min	D
Planter	7' min	E
Tree Spacing	30' o.c. avg	
Sidewalk	8' min	F

L. Gil Dr - 20'-20'



GENERAL

Right of Way	20'	A
Motorist Operating Speed	25 mph	
Walkway	Sidewalk	
Bikeway	N/A	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

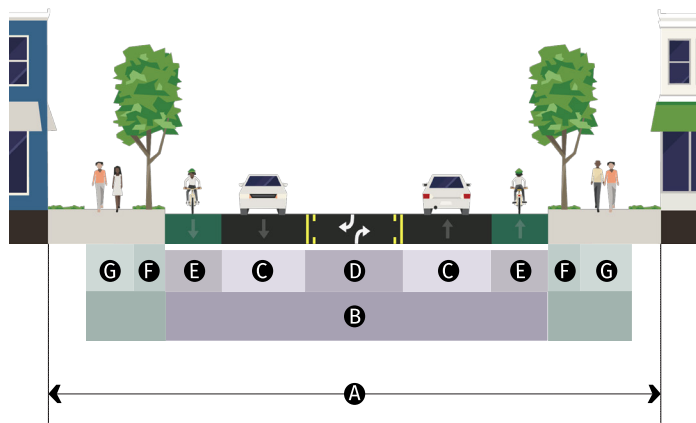
TRAVELWAY

Pavement Width	20' max	B
Travel Lane	10' max	C
Parking Lane	N/A	
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	4' min	D
Tree Spacing	30' o.c. avg	
Sidewalk	4-6' min	E

M. McCoy Cir - 76'-52'



GENERAL

Right of Way	76'	(A)
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Bike Lane (both sides)	
Parking	N/A	
Planting	Tree Grate / Tree Lawn	

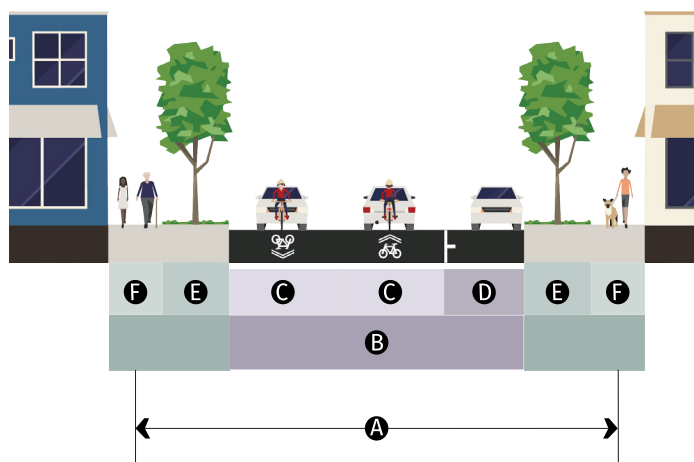
TRAVELWAY

Pavement Width	52' max	(B)
Travel Lane	11' max	(C)
Turn Lane	12' max	(D)
Parking Lane	N/A	
Traffic Lanes	2 lanes with Center Turn	

STREETSCAPE

Cycle Track	7' min	(E)
Planter	4' min	(F)
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	(G)

N. Northgate St - 53'-33'



GENERAL

Right of Way	53'	(A)
Motorist Operating Speed	30 mph	
Walkway	Sidewalk	
Bikeway	Shared Travel Lane	
Parking	Parallel (one side)	
Planting	Tree Grate / Tree Lawn	

TRAVELWAY

Pavement Width	33' max	(B)
Travel Lane	12' max	(C)
Parking Lane	9' max (one side)	(D)
Traffic Lanes	2 lanes	

STREETSCAPE

Planter	7.5' min	(E)
Tree Spacing	30' o.c. avg	
Sidewalk	6' min	(F)

APPENDIX C. HISTORIC DISTRICT GUIDELINES

ARTICLE 1: PURPOSE OF THE HISTORIC DISTRICT DESIGN GUIDELINESD:2

DIVISION 1: PURPOSE D:2

DIVISION 2: GENERAL INFORMATION D:2

ARTICLE 2: COMMERCIAL BUILDINGSD:5

DIVISION 1: BUILDING CHARACTERISTICS D:5

DIVISION 2: BUILDING COMPONENTS D:7

DIVISION 3: MATERIALS D:10

ARTICLE 3: RESIDENTIAL BUILDINGS..... D:15

DIVISION 1: RESIDENTIAL BUILDING CHARACTERISTICS D:15

DIVISION 2: HISTORIC NEIGHBORHOOD CHARACTERISTICS D:18

DIVISION 3: RESIDENTIAL BUILDING COMPONENTS D:23

DIVISION 4: RESIDENTIAL BUILDING MATERIALS D:31

ARTICLE 4: HISTORIC DISTRICT SIGNAGE..... D:36

DIVISION 1: GENERAL D:36

ARTICLE 5: STANDARDS FOR GUIDELINES FOR SUSTAINABILITY D:45

ARTICLE 6: DEFINITIONS..... D:50

ARTICLE 1: PURPOSE OF THE HISTORIC DISTRICT DESIGN GUIDELINES

DIVISION 1: PURPOSE

- A. These guidelines and recommendations are intended to preserve and maintain the character of the historic buildings in San Marcos. They reinforce and protect the defining features of the historic districts and define those visual elements which are common to the district as well as the qualities unique to this community.
- B. This document should help to preserve the integrity of historic buildings and enhance the value of the Historic Districts for both the private investor, residents and owners, and the community as a whole. When addressing changes to an individual building, it must not be taken out of context. Modifications affect the block as a whole and should have the broad interest of the community in mind.
- C. The guidelines have no control on the use of the building or its interior. Only the exterior portions, which includes new construction, additions, and rehabilitation of the building shall comply with the guidelines set forth.
- D. These guidelines should be applied to a building based on its original use and construction. For example, a residence may currently be used as an office, therefore it is considered a commercial business, but it is still viewed as a residential building.
- E. These guidelines will be used by the City of San Marcos to provide an objective basis for the decisions of the San Marcos Historic Preservation Commission and City Planning Staff. The guidelines specifically address the issues below, as outlined in Section 4.5.2.1(l) of CodeSMTX.
 - 1. Height
 - 2. Proportion of buildings's front facade
 - 3. Proportion of openings within the facility
 - 4. Rhythm of solids to voids in front facades
 - 5. Rhythm of spacing of buildings on streets
 - 6. Rhythm of entrance and/or porch projection

- 7. Relationship of materials and texture
- 8. Roof shapes
- 9. Walls of continuity
- 10. Scale of building

DIVISION 2: GENERAL INFORMATION

Section C.1.2.1 Renovating Previously Modified Buildings

- A. Buildings have a tendency to be modified and modernized over time as a way of "keeping up with the times" and through maintaining a building by replacing deteriorated materials. Replacement materials were not always compatible with the original design and altered the initial appearance.
- B. The following guidelines are recommended:
 - 1. As renovations to historic buildings take place, consider returning a building to its original appearance whenever possible. This will enhance the building and the surrounding district.
 - 2. As renovation takes place, refer to old photographs if available. If clear evidence of previous details exist, use these clues to return the building or detail to its original appearance. If no photos are available, construct a new simplified design based on the Building Characteristics, Building Components and Materials sections of this document.

Section C.1.2.2 Commercial Buildings

- A. If the ground floor has been recessed behind the common wall of the surrounding building, bring the storefront back to the sidewalk.
- B. Replace modified aluminum entries and windows with more traditional proportions and materials.
- C. Open blocked up windows and transoms.
- D. Reinstall canopies if there is evidence that they previously existed. Canopies provide a cohesive quality to the pedestrian experience. They have a longer life than fabric awnings. Most buildings in San Marcos had canopies rather than awnings.

Section C.1.2.3 Residential Buildings

- A.** Porches are frequently the most modified portion of a house. Returning a porch to its original design, when possible, will make a positive visual impact to the house and the neighborhood.
- B.** If a porch has been lowered, consider raising it to its original level.
- C.** If the original columns have been replaced with another material and design, consider replacing the columns with columns which are compatible with the original design and material.
- D.** If porches have been closed to provide additional space in the house, look for other locations for this space when remodeling.
- E.** If porches have been removed, consider reconstructing them.
- F.** Synthetic siding which has been applied over the original siding changes the character of the house. Consider removing the synthetic siding and restoring the original detail of the house.
- G.** When windows have been removed and placed with windows of a different material and proportion, consider replacing them with windows to match the original.

Section C.1.2.4 New Construction in Historic Districts

- 1.** As opportunities arise, new construction will take place in historic districts and this is to be encouraged in order to maintain a viable living community. However, new construction should follow the characteristics and guidelines outlined in this document.
- 2.** Respect and maintain the overall height of buildings in the immediate vicinity.
- 3.** Maintain the building relationship to the street. Set the new building back a distance equal to that of the surrounding structures and orient the new building in the same way.
- 4.** Maintain the established rhythm of the structural piers in the surrounding buildings, consider a similar rhythm, structural bay or width.
- 5.** Respect the overall proportion and form. Maintain the width to height relationship.

- 6.** Utilize floor heights common to adjacent buildings. Maintain the horizontal continuity of the elevations in commercial buildings.
- 7.** Roof forms and roof lines or cornices should be consistent in shape and detail.
- 8.** Maintain the solid-to-void pattern established in the window openings and follow the proportions established in these openings.
- 9.** Materials used in the construction of new buildings should reflect the period in which they are built but should respect the established scale of adjacent buildings.
- 10.** Construct garages and carports to the rear of the property, behind the face of the house.
- 11.** Orient garage doors away from the street when possible.
- 12.** Consider the density of a neighborhood when constructing new buildings on vacant or subdivided lots.
- 13.** Maintain the orientation of building entrances on a street.
- 14.** Construct additions to existing buildings that do not overpower the original building.
- 15.** Seek guidance and assistance early in a project. Look at options that will enhance the historic district and satisfy your needs.
- 16.** Avoid creating a false history when constructing new buildings. New buildings are new buildings and should not be confused with historic structures.

Section C.1.2.5 Priority Planning - Renovation Guidelines

- A.** Evaluate the existing structure to establish the most important work to be completed.
- B.** What may be the most visible to the eye may not be the most important to the life of the building. For example, a new coat of paint for the front of the building will not do much to extend the life of the building if the roof is leaking badly.
- C.** Identify the “character defining” features of the building and relate their importance to the character of the street as well as the building itself.

- D. Retain as much of the original building material and detailing as possible.
- E. If the original feature is beyond repair, replace the original with new material to match the original in dimension and profile.
- F. Determine the overall quantity of material to be repaired or replaced and plan to repair only that material. If one window is beyond repair there is no need to replace all windows in the building.
- G. Add up the overall cost to determine whether it is within your budget. If not, revisit the priorities.
- H. If compromises must be made with regard to budget and existing conditions, focus on what will extend the life of the building and what is most visible from the street and has the most impact on the overall streetscape.
- I. Limited financial assistance may also be available through loan programs.

Section C.1.2.6 Maintenance

- A. A building requires care, maintenance and cleaning.
- B. It costs less to repair and maintain than to replace or rebuild damaged areas.
- C. Clean the building gently. Never sandblast an old building. Soap and water can do a lot.
- D. Clean roof drains of trash and leaves. Check for good drainage.
- E. Check the roof for leaks and patch them immediately. Leaks commonly occur where the roof and wall meet and where pipes punch through the roof.
- F. Check down spouts and make sure rain water runs away from the building.
- G. Wash windows and repair any damaged wood or glass.
- H. Check for loose glass and re-putty as necessary and paint.
- I. Check canopy and awning attachments and anchors. Replace worn or damaged materials.
- J. Repaint to protect wood and metal from deterioration.
- K. Keep signs freshly painted and securely anchored.

Section 1.1.1.1 Resources

The following agencies and associations are helpful resources for technical assistance and guidance in the rehabilitation of old buildings.

Historic Preservation Liaison
Planning and Development Services
City of San Marcos
630 East Hopkins
San Marcos, Texas 78666
512.393.8230
www.sanmarcostx.gov/historicpreservation

The Texas Historical Commission
Division of Architecture
P.O. Box 12276
Austin, Texas 78711-2276
512.463.6268
www.thc.texas.gov

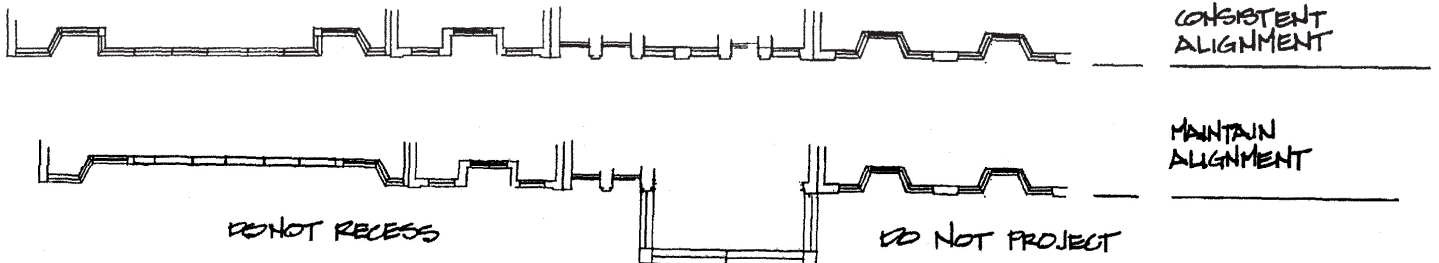
The National Trust for Historic Preservation
1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036
202.588.6054
savingplaces.org

ARTICLE 2: COMMERCIAL BUILDINGS

DIVISION 1: BUILDING CHARACTERISTICS

A. Building Alignment

1. Buildings in the Downtown Historic District have a consistent alignment or have a common set back. The front wall of all buildings is constructed along the same line.
2. This common line of construction should be respected and maintained to give the appearance of a common wall.
3. Construction and renovation of buildings should not recess from this line.
4. No part of the building should project beyond this line except canopies, awnings, and, possibly, signage.
5. Historic buildings that are not in the Downtown Historic District also have a set back from the street which should be respected.



B. Rhythm and Visual Continuity

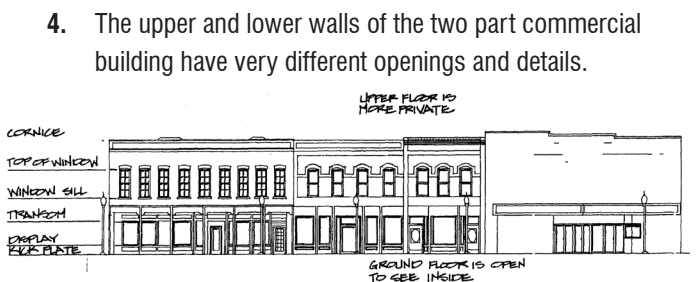
1. Most commercial buildings in the Downtown District have elements in common, which create a rhythm and visual pattern.
2. The majority of these buildings were designed on a strong architectural tradition of repeating parts. This tradition should be maintained.
3. While all buildings do not have identical details, the visual continuity and rhythm remains.

4. These characteristics should be maintained and enhanced as renovations occur.



C. Horizontal Organization

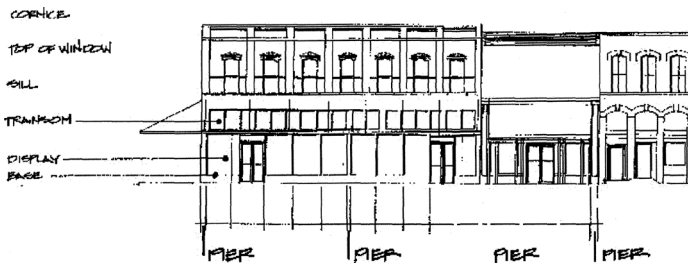
1. Downtown commercial buildings have a common horizontal organization in the heights of storefronts, canopies, etc.
2. There is a clear difference between the ground floor commercial activities and the more private upper activities or living spaces.
3. The horizontal bands are clearly seen in the front facades of the buildings.



D. Ground Floor Rhythm

1. The regularity of building width creates a rhythm at the ground floor. Each bay, or structural width, is primarily made of glass panels. The panels create rhythm within the structural bay by repeating a similar width.

2. Within the ground floor of the block, the wall surface is comprised vertically of three horizontal elements: the base or kick plate, the display windows and glass portions of the doors and the transom.
3. These are consistent elements in the ground floor of almost all buildings. These proportional elements should be retained.
4. The repetition of display window and door components creates a rhythm in the block of buildings.
5. A characteristic common to most commercial buildings is the recessed entrance. This recessed space adds to the rhythm of the building face. This rhythm is also experienced by the pedestrian walking down the block.



E. Upper Floor Organization

1. The window openings are well defined at the upper floor and establish a pattern and rhythm of window-wall-window or solid-void-solid-void.
2. Windows are vertically proportioned, usually tall and thin. The windows are normally made of wood and both top and bottom portions open for ventilation. Each window frequently has a decorative top piece.
3. Buildings constructed later in the 1900s, after the Victorian period, often have windows placed in pairs or in banks of three.



F. Common Building Heights and Roof Shapes

1. The 2 story buildings have a consistent height and similar capping detail. Some buildings have a constructed cornice of masonry while others have a pressed metal cornice.
2. Buildings of 1 story have more variation in the height and detail of the cornice than their 2 story counterparts.
3. Roofs on commercial buildings are not often seen from the front. They are nearly flat and are hidden behind the wall of the building.
4. Side walls and rear elevations are not as detailed as the front elevation, but most roof lines have some form of cap or detail.



DIVISION 2: BUILDING COMPONENTS



Section C.2.2.1 Storefronts

- A. Commercial storefronts have a basic organization, both vertically and horizontally, which does not depend on the size of the building. This organization exists whether the building is one story or three story.
- B. There is a common vertical three-part construction with a base or kick plate, a display window, and a transom.
- C. Commercial storefronts also have a common horizontal three-part construction in each bay including display-entry-display or display-displayentry. Very transparent storefronts invite shoppers to look in.
- D. These three-part divisions should be preserved.
- E. Transoms should not be covered over or painted out.
- F. Display windows should remain transparent and not be altered in size.
- G. Kick plates should be preserved and maintained. Kick plates were originally installed to raise the storefront and reduce the chance of damage. They are used the same way today.

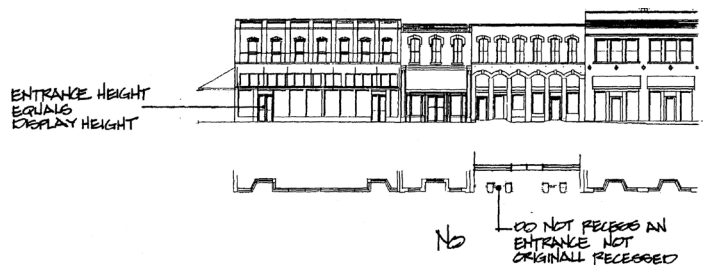


Section C.2.2.2 Entrances to Buildings

- A. The entrances to historic commercial building are recessed or set back from the face of the building to draw people into the building, allow space for entering and to provide protection from the elements. These entrances should not be changed. They should not be removed to create more interior space, nor

should they project out beyond the common building wall.

- B. Entrances are proportioned to fit within the overall organization of the store front. The entrance height is equal to the top of the display windows.
- C. If an entrance was not recessed originally, it should not be changed.
- D. Entrance heights should be retained. They should not be lowered.

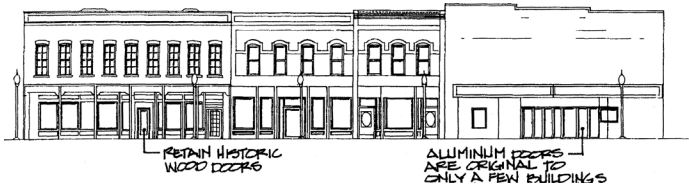


Section C.2.2.3 Doors in Commercial Structures

- A. Historic doors for commercial buildings are constructed with large glass panels to let you see inside. They also have a kick plate similar in design and proportion to the kick plate of the store front. Historic doors should be retained and repaired if necessary
- B. Doors are frequently installed in pairs. It is important to keep this configuration and not replace the doors with one large single door or reduce the opening to accommodate a new, standard sized door.
- C. If historic wood doors are beyond repair, it is important to replace them with wood doors of the same dimension and proportion.
- D. Aluminum doors and frames are not appropriate on Victorian buildings, or where wood doors were originally installed.
- E. Only aluminum doors, if original to the buildings, should be replaced with aluminum doors.



DO NOT INSTALL
AN ALUMINUM DOOR
IF A WOOD DOOR WAS
ORIGINALLY THERE



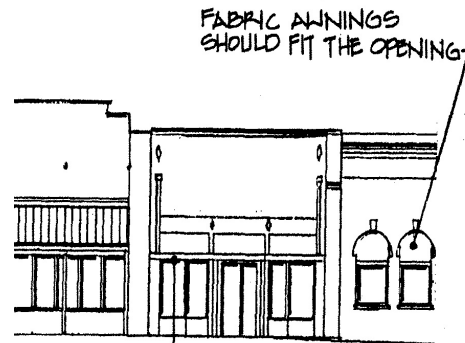
RETAIN HISTORIC
WOOD DOORS

ALUMINUM DOORS
ARE ORIGINAL TO
ONLY A FEW BUILDINGS

Section C.2.2.4 Canopies and Awnings

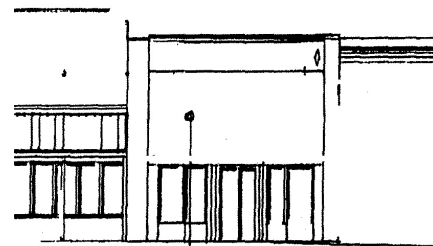
- A. Canopies are common on historic commercial buildings. They are a significant horizontal element of the building block and create a common, human scale.
- B. Some of the canopies in San Marcos are hung from the buildings with rods while others are supported by poles or columns. If "pipe" columns have been installed to support the canopy, they should not be left exposed. A box columns should be constructed around the pipe.
- C. Canopies should be maintained if still in place and consideration should be given to reinstalling a canopy if there is evidence that one previously existed. If canopies were previously replaced with contemporary aluminum canopies, they should return to the original design which was traditionally wood. Designs should be compatible to the time period of the building.
- D. Fabric awnings can also be found on commercial buildings. Canvas type materials are appropriate for installation and the awning should be constructed to "fit" an opening. A rectangular awning should be installed on a square or rectangular opening and an arched top awning is appropriate for an arched opening.
- E. Bubble awnings, awnings of shiny plastic, and internal lighting are not appropriate.

- F. Awnings and canopies should not conceal the character defining features of historic store fronts.
- G. The bottom of all canopies and awnings should be installed at the same height above the sidewalk. This will continue the horizontal organization already established. Canopies on non-historic buildings are encouraged to relate to the adjacent historic structures in design and materials.



FABRIC AWNINGS
SHOULD FIT THE OPENING

RETAIN AND REPAIR
CANOPY. RODS WERE
ORIGINAL TO MOST
BUILDINGS

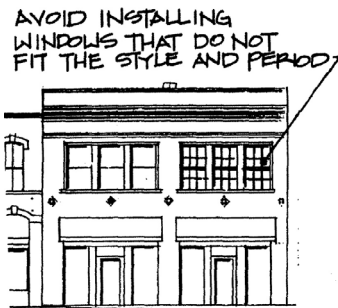
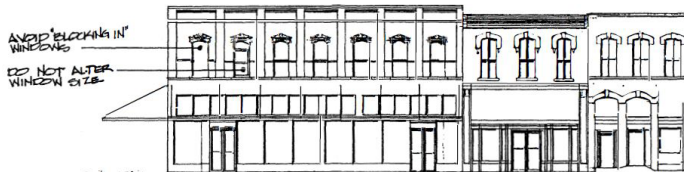


AVOID OVERPOWERING
A BUILDING WITH A
LARGE FABRIC AWNING

Section C.2.2.5 Upper Floor Windows

- A. The majority of windows on the upper floors of commercial buildings appear to be "punched" or constructed as individual units in the walls of the buildings. Newer buildings have windows constructed in combinations of two or three. Windows should not be modified.

- B. The windows are traditionally wood framed and double hung, meaning the sash move up and down. Wood windows should be maintained and not replaced by aluminum windows.
- C. Most window openings are tall and narrow. These openings should not be modified to install new, smaller windows.
- D. Many windows have hood molding or decorative tops made of pressed metal, stone, brick or other materials. These moldings should be retained and not removed.

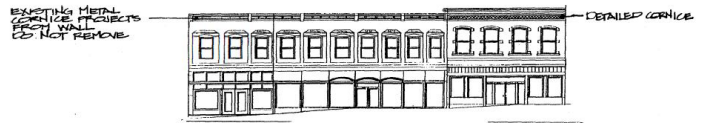


Section C.2.2.6 Cornices and Roof Lines

- A. The roof line of historic Victorian commercial buildings is usually detailed to create a "crown" or cornice. If newer materials cover these details, it is recommended that these materials be carefully removed to reveal the original detail.
- B. If the original cornice and detail are missing, replace the detailing to match the original if there is enough information to do so. If there are no photographs of evidence of the original design, construct a new, simplified cornice of similar proportions.
- C. The cornices of San Marcos frequently project out from the face of the building and should be maintained.
- D. The roof of commercial buildings is usually not seen from the front or sides of a building but may be visible from the alley. They are not seen from the main street because a parapet, or wall, extends above the roof to conceal it. This parapet should

be retained and maintained. It is at the junction between the roof and parapet wall that many roof leaks occur.

- E. Upper floor additions to buildings should not violate the existing parapet.



Section C.2.2.7 Alley Facades and Sides of Buildings

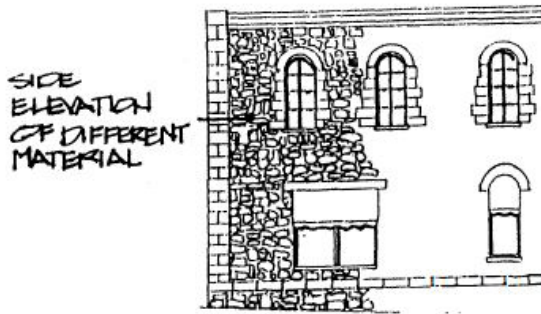
- A. The side and rear elevations of most historic commercial buildings were frequently constructed of a different material than the more prominent front facade. Frequently the detail, and the number and size of windows differs from front to side and rear. Alley and side facades should be respected for their simple design and should not be "dressed up" to create a false impression or false history.
- B. Some corner buildings were constructed with two "fronts" to face both streets. Both of these facades should retain their prominence.
- C. Historically, painted advertising often appeared on the walls of buildings. This signage is an important part of the history and development of commercial buildings and businesses. This signage should not be removed or painted over.
- D. Historically, alley entrances to buildings are utilitarian and not of architectural significance. As parking becomes more available from the rear or alley of the building, these entrances to the building may become a more prominent access to the building. However, this entrance should not compete with the front entrance or create a phony image.



“New” rear entrance and original entrance along Hopkins Street (202 N LBJ Dr)



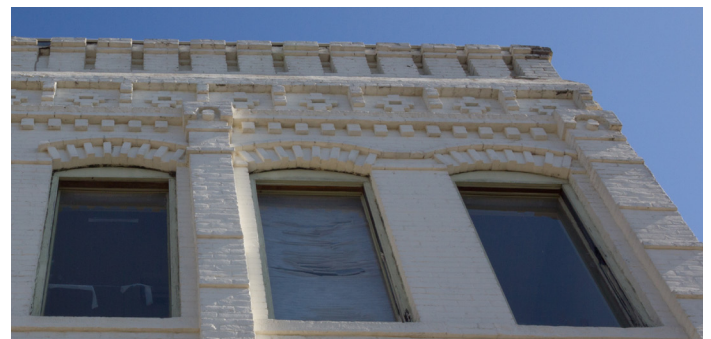
Corner building with two “front” facades. (100 W Hopkins St)



DIVISION 3: MATERIALS

Section C.2.3.1 Brick Wall Construction

- A. Many of the commercial buildings in San Marcos are made of brick masonry. These brick walls are usually about a foot thick or more and carry the weight of the building.
- B. Brick walls are constructed by stacking single pieces together to create a pattern. Most wall patterns have a defined horizontal line.
- C. Brick is used to create decorative features which need to be preserved. These features are usually found around openings on a building, at the top of buildings to create a cornice, or to add to the horizontal organization of the building and block.
- D. It is important not to damage the face of the brick by sandblasting it or by using other abrasive methods of cleaning. Clean a building gently. Start with a solution of water and liquid Joy dishwashing detergent and a stiff brush. Chemical cleaning may be required for difficult stains but cleaning must be conducted by a knowledgeable professional.
- E. The material between the brick is called mortar and is important to the integrity of the wall. If the mortar is missing, it should be replaced with mortar of the same ingredients. Use a sand-lime recipe for mortar which is compatible with the old brick. Modern masonry mortar has cement as main ingredient which is too hard for historic brick. Too much cement in the recipe will accelerate the deterioration of the brick and may cause water to enter the wall.
- F. It is important to preserve brick detailing because it adds to the character of the building.



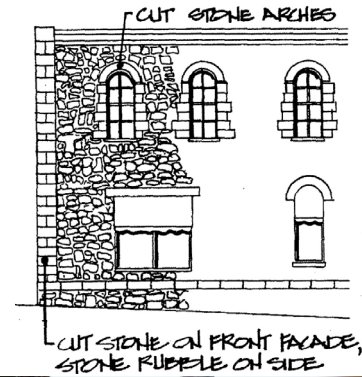
Brick details in arches and cornice (102 N LBJ Dr)



Brick cornice / Brick banding (101 E Hopkins St)

Section C.2.3.2 Stone Rubble and Cut Stone

- A. Stone rubble refers to a type of stone which has an undefined shape. The uneven face of stone rubble and uneven size of the pieces provides a unique texture that is not found in other materials.
- B. Cut stone is a precisely shaped stone, usually with a smooth face in the buildings of San Marcos. It is frequently as a decorative element on buildings or as a way to accent an opening. Cut stone can also have a great amount of detail such as columns and capitals.
- C. The limestone of San Marcos is a more durable stone than limestone found in other parts of Texas. Stone walls have a natural beauty and require no protective coatings such as plaster.
- D. The stone walls are put together with mortar in the same way brick walls are. The mortar should not be harder than the limestone. Portland cement mortar can cause damage to stone walls.
- E. If stone shows evidence of dirt and grime, it can be cleaned with a mild solution of soap and water. Do not sandblast stone. Care should also be given if a chemical cleaning solution is to be used. Some chemicals burn the face of limestone.



Cut stone blocks for walls of older buildings (142 N LBJ Dr)



Carved stone capitals (100 E Hopkins St)

Section C.2.3.3 Wood and Commercial Buildings

- A. Wood is a material that is used for a variety of architectural details such as storefronts and windows on many of the commercial buildings in San Marcos. Common locations

of wood are window frames and sash; wood columns and canopies; wood storefronts including doors and frames for display windows and for kick plates or bases.

- B.** Wood, when well maintained, can last for decades. However, it will rot with the presence of moisture. It is important to keep wood surfaces painted. When wood is badly deteriorated it should be replaced with wood of the same profile and dimension.
- C.** Rough sawn wood is not appropriate for installation in historic buildings.
- D.** Wood should be replaced with wood, not a simulated material.
- E.** It should be noted that wood does not have a “wood grain” surface.



Retain wood windows (101 E Hopkins St)



Retain wood transom, storefront and doors (127 E Hopkins St)



Retain wood window frame and sash (101 E Hopkins St)

Section C.2.3.4 Metal as a Building Material

- A.** There are several types of metal found in and on buildings in San Marcos. The type and application of the metal on buildings help to identify the time period and style of the commercial buildings. Buildings of the late 1800s and early 1900s incorporated pressed metal and cast iron while more contemporary buildings utilize aluminum and steel in their construction.
- B.** Cast iron columns and beams were used as structural components in some Victorian buildings around the Downtown Square. Some columns stand away from the face of the building as on 127 Hopkins and 144 San Antonio. Others become part of the building storefront detail as on 113 Guadalupe and 107 Hopkins. These structural members, while functional, also add detail and scale to the building storefronts and should be retained.
- C.** Pressed metal is often thought of as an interior ceiling material but is used for cornices and other details on many of the buildings of San Marcos. Several metal cornices are found on Guadalupe Street. Pressed metal cornices are constructed over a wooden framework. Deteriorated wood should be replaced to provide adequate support for metal cornices. Damaged and deteriorated pressed metal panels can be fabricated and replaced if necessary to retain the overall detailing. Pressed metal window hoods are found at 101 Hopkins. Pressed metal facades, though modified from the original, can be found at 110 San Antonio Street and 114-116 and 118-120 LBJ Drive.
- D.** Another metal found frequently in San Marcos is aluminum. Aluminum is a more contemporary and was used on buildings

dating from the 1930s such as 120 San Antonio Street. As a general rule, aluminum should not replace wood as a building material. This is especially true of doors and windows and their frames. If aluminum appears to be the only option as a replacement material for deteriorated wood, the aluminum should be of similar profile and should have a factory painted finish. Mill finish or “shiny” aluminum should not be used on a historic building to replace a previously painted material.

- E. Miscellaneous steel components can also be found at porch columns and porch structures, railings, turnbuckle supports at canopies, downspouts, etc.
- F. It is important to keep pressed metal, cast iron and steel well painted to avoid rust and deterioration.
- G. Metal should only replace metal.



Pressed metal window hoods (101 E Hopkins St)



Retain cast iron column (127 E Hopkins St)



Pressed metal cornice - modified but retains scale (114 N LBJ Dr)



Retain cast iron storefront (102 N LBJ Dr)



Cast iron wood window hoods are a unique detail (107 E Hopkins St)

Section C.2.3.5 Glass

- A.** The transparent or “see through” quality of glass has been utilized in commercial building storefronts to draw customers into the shops and ground floor spaces. This is a quality that should be retained.
- B.** Glass in the transom windows allowed light to enter deep into the ground floor. These windows should retain their transparent quality
- C.** Tinted or reflective glass is not appropriate in storefronts and upper floor windows in historic commercial buildings and districts. This type of glass is uninviting and detracts from the character of commercial buildings.
- D.** Glass was also used as a cladding material on commercial buildings during the 1920s and 1930s. The only glass skin found on a building in San Marcos is located at 101 E. Hopkins. An opaque red glass is installed on the base and storefront columns of the building. While this material is not original to the building, it can be retained because the remodeling has reached a period of historic significance and the traditional building characteristics have been retained.
- E.** Broken glass must be replaced immediately to avoid damage to the interiors of buildings and building materials.
- F.** Replace broken glass with glass that matches the original in color quality.



Clear glass in windows (125 N Guadalupe St)

Section C.2.3.6 Stucco

- A.** Stucco or plaster is not a material common to San Marcos historically.
- B.** Stucco is a material that has no dimension of its own, therefore it is not compatible in scale to the more common materials of San Marcos such as brick and stone.
- C.** Stucco should not be used to cover a historic building material but might be used on new construction.



Clear glass in storefront (138 E San Antonio St)

ARTICLE 3: RESIDENTIAL BUILDINGS

DIVISION 1: RESIDENTIAL BUILDING CHARACTERISTICS

Section C.3.1.1 Building Development and Characteristics

- A.** The historic neighborhoods of San Marcos developed during three major time periods. Each period of construction brought different architectural styles, details and materials.
- B.** The first surge of building took place from the 1880s through the 1910s. The wealthy of San Marcos built large Queen Anne and Classical Revival style houses. Along more modest means, Folk Victorian homes were constructed. Folk Victorian, also known as Vernacular, was smaller in size and simpler in detail. "Folk" styles were constructed of commonly available materials purchased as off-the-shelf items from the local lumber yards. Wood was the most common building material of houses during this time period.
- C.** In the 1920s and 1930s Craftsman and Bungalow houses were constructed on vacant lots in the current historic districts. Wood dominated residential construction during this time period but brick and stone were used for porch details and column bases. Concrete block was introduced as a building material for a few craftsman houses in the San Marcos neighborhoods. It was also during this time period that a few revival style houses, such as Tudor and Italian Renaissance were constructed using masonry.
- D.** By the 1970s a few vacant lots remained in the present historic districts but several houses were demolished to make way for the construction of newer housing which included modern Ranch and other contemporary styles. It was during this time period that brick and stone were readily used as the exterior of a house.
- E.** The most common building styles in San Marcos consist of:
 - 1.** Victorian styles comprised of many shapes and architectural features including wrap around porches with lacy details and railings, bay windows, recessed second floor porches, turrets and steep, complex roof forms.
 - 2.** Folk Victorian "L" Plan has a long leg running parallel to the street with a porch that ends at the short leg which faces the street and is usually capped with a gable roof.
 - 3.** Folk Victorian "I" plan has a long face to the street, a central entrance, symmetrical facade and a gable roof.
 - 4.** Folk Victorian pyramid has a square plan with a central entrance, symmetrical facade and a hip roof.
 - 5.** Neoclassical houses frequently have an ornate central entrance and symmetrical front facade. Columns with capitals may run the full height of a 2-story house which is rectangular in plan and runs parallel to the street.
 - 6.** Prairie box, or 4-square, is usually square in plan, 2-story in height, with a single story porch, box columns and an entrance which is not centered.
 - 7.** Craftsman and Bungalow houses can be recognized by their distinctive box columns which are frequently tapered on bungalow plans and have column bases that extend to the ground. Braces appear at the front facing gable roof line and rafter ends are usually exposed.
 - 8.** Tudor style houses are rare in these neighborhoods and can be identified by arched entry doors, shallow roof overhangs and prominent chimneys and masonry construction.
 - 9.** Italian Renaissance style is only found at 1030 Belvin Street and is identifiable by the hip roof shape covered in barrel tile and supported by decorative brackets, recessed entry porch with single story classical columns and symmetrical facade.
 - 10.** Modern Ranch style is known for the long, low shape with attached garages and small front porches. These houses introduce new materials to the neighborhoods such as metal framed windows, brick and stone for siding and fabricated metal porch posts
 - 11.** Spanish Eclectic influence can be found at 1133 Belvin Street. It is identifiable by its flat roof with no overhang. A single prominent arch identifies the front entry. The exterior wall surface is stucco.
- F.** Get to know your home and your neighborhood.
 - 1.** Acknowledge and retain the distinctive characteristics of each style house and the time period in which it was constructed.

2. Avoid adding, changing or eliminating decorative elements of a house, which are from another time period or architectural style.



Craftsman - 811 W San Antonio St



Queen Anne - 1236 Belvin St



Ranch - 923 W Hopkins St



Folk Victorian - 802 Belvin St



Italian Renaissance - 1030 Belvin



Folk Victorian "I" Plan - 122 Scott St



Prairie Box - 827 W San Antonio St



Folk Victorian "L" Plan - 621 W San Antonio St



Spanish Eclectic - 1133 Belvin



Neo-Classical - 227 Mitchell St

DIVISION 2: HISTORIC NEIGHBORHOOD CHARACTERISTICS

Section C.3.2.1 General Characteristics

- A. The Belvin Street and San Antonio Street Historic Neighborhoods reflect the development of the City as well as national developmental trends. The farmland at the edge of town became more populated as the town expanded. Both neighborhoods were oriented along primary roads to and from the Central Business District.
- B. The Belvin Street Historic District is roughly defined by Scott Street on the east and Bishop Street on the west. The San Antonio Street Historic District parallels Belvin Street with Hopkins Street separating the two districts. The boundary begins just west of Blanco Street and extends west to Bishop Street. It is important to keep each historic district in context and recognize that there are differences between them.
- C. While each historic neighborhood has its own identity, the residential historic districts of San Marcos have the following characteristics in common:
 1. Parkways, which are the unpaved areas between the curb and sidewalk. These parkways have traditionally been planted with trees, grass or foliage.
 2. Carriage blocks of stone are scattered throughout the existing historic neighborhoods. These blocks were originally used as a step when getting into carriages or mounting a horse.
 3. Stone lined drainage beds are unique to San Marcos and create part of the charming character of the neighborhoods. These beds carry water runoff and are located perpendicular to the street.
 4. There is a mixture of architectural styles and periods of construction in each historic neighborhood of San Marcos.

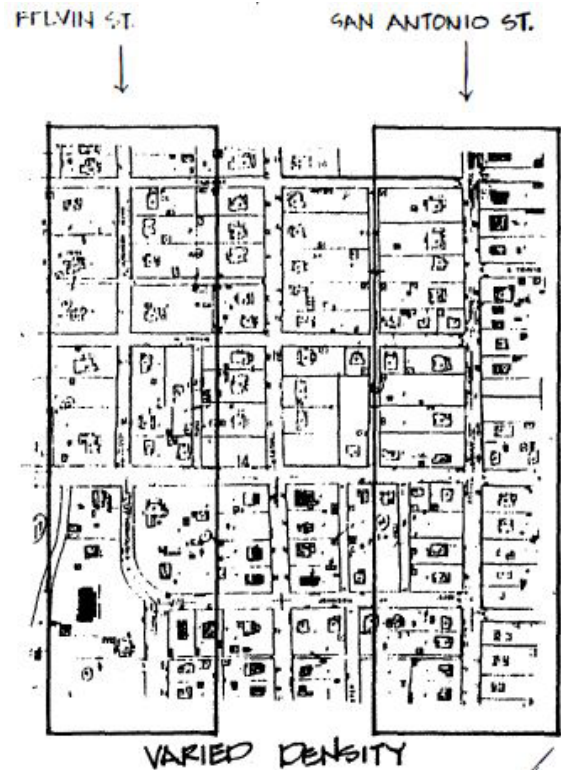
Section C.3.2.2 The Belvin Street Historic District

- A. This district possesses the following unique characteristics:
 1. Lot sizes in the Belvin Street District are frequently larger than that of the San Antonio Street Historic District.
 2. Many of the houses on Belvin Street are larger in scale.

3. The Belvin Street Historic District has several front yard fences. There is evidence that a few front yard fences existed historically. However, the current number and type of front yard fence appears to be a more recent installation, rather than a historical one.



Fencing in front yard - 730 Belvin St



Section C.3.2.3 San Antonio Street Historic District

- A. This district distinguishes itself through the following identifying features.

1. Unique concrete street markers located at San Antonio Street intersections designate the block number and street name.
2. The San Antonio Street Historic District has a larger collection of Craftsman and modern housing styles than the Belvin Street Historic District.
3. Many of the yards have a “curb” just inside the sidewalk which further defines the yard from the parkway.
4. There have been many alterations to the houses in the San Antonio Street Historic District.
5. The density of San Antonio Street is substantially greater than that of Belvin Street due to the lot size and development pattern.

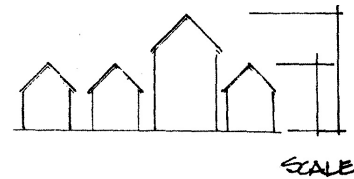
Section C.3.2.4 Definitions of Historic District Characteristics

- A. Building Form.** Building form is primarily dictated by the style of the building. For example, Queen Anne and Victorian styles are recognizable by their compositions of multiple shapes which include bays, dramatic roof lines, dormers and porches. The Craftsman style is derived from a simplified rectilinear plan. The Neoclassical building also derived its form from a rectilinear plan but has a dominant central entry porch with columns which extend the full height of the building. The Tudor form is derived by one or more prominent cross rectangles, its building materials (principally masonry and stone) make it less compartmentalized with fewer openings.

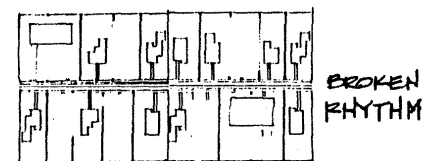
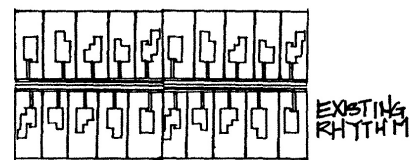


- B. Scale.** The scale of a building is measured as the relationship of building size to something else, such as a human. Windows, entrances, porches, bays and the dimension of building

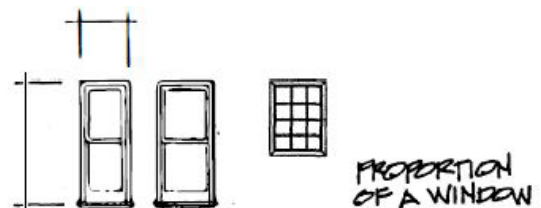
materials contribute to the overall scale of the building. The houses in these districts are one or two stories high and are considered to be “human” scale.



- C. Rhythm.** The rhythm of a street is created by the spacing between houses, the location and spacing of sidewalks from the curb to the entrances of the houses, the location and spacing of the driveway entrances to each property. The rhythm of the street adds to the visual continuity and establishes the organization and site design guidelines for a neighborhood.



- D. Proportion.** Proportion is the relationship of the dimensions of an object to itself, such as height to width. Proportion is inherent in all aspects of a building form, components and material. As an example, older homes with higher ceiling heights have windows that are taller than they are wide. This proportion is approximately 2 1/2 high to 1 wide. House styles of the 1960s to 1980s usually have lower ceiling heights so their windows are shorter and wider.



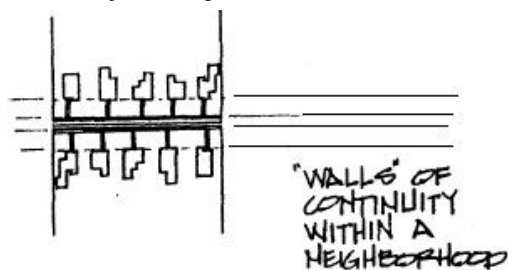
- E. The Relationship of Materials and Texture.** The materials and texture of each home is representative of the style and period of construction. The texture of a material can express mass. The

inherent properties and dimensions of construction materials like brick and wood boards help in understanding the home's size, scale and proportion. Because stucco has no dimension, it is difficult to measure its relationship to the scale of a building. Tudor houses, for example are constructed mainly of brick and stone and because of the size and texture of these materials, the houses express mass with a rustic appearance.



CONTRASTING
MATERIALS
EMPHASIZE
DETAIL

- F. Walls of Continuity.** The front of each building, its walls, its porch alignment and even fences help define a “wall” that establishes a visual pattern along the streetscape. Each neighborhood has visual continuity, starting at the street which is basically a straight line of uniform width. A curb runs along the street defining the green space of the parkway followed by the sidewalk. Each of these elements work to organize a neighborhood. These organizational elements along with orientation and placement of houses on the lot establish the visual continuity of a neighborhood.



- G.** Due to the difference in lot size between the Belvin Street and San Antonio Street Districts, the visual continuity and rhythm are different. Each neighborhood has its own established organization which should be respected.
- H.** As changes are proposed to a site or house, review the lines of continuity and rhythm established in the neighborhood. Look at the scale, form and proportions of proposed changes. Will the proposed project retain and enhance the characteristics or will it create change?

Section C.3.2.5 Site Development and Orientation

- A.** The organization pattern established in each Historic District guides the development and proposed alteration of each site. Historic neighborhoods were designed to be pedestrian friendly since walking was a major mode of transportation. Houses face the street with a logical, visible entrance and a sidewalk that leads from the street to this entrance. Sidewalks from the street to the front door help establish rhythm.
- B.** There is an established distance from the street to the house, which is called a setback. This setback reinforces the importance of the entrance and orientation of the building. Building beyond this setback would change the visual continuity established.



Concrete ribbons leading to garage behind the house (921 W San Antonio St)



Front yard fence does not obscure the house (730 Belvin St)

- C.** Driveway approaches in the front yard lead to garages and secondary outbuildings, which are located behind the main house. Contemporary style houses have incorporated their garage or carports into their house plan, but typically they do not project beyond the established front wall of the house. While the construction of new garages and carports is

sometimes necessary, their placement and approach should respect the original “front line” of the house. This would place them behind the existing setback. Locating them to the rear of the property is preferable.

- D. Front yards are defined by sidewalks, yard curbs, short walls, boundary walls made of stone, brick, concrete or concrete block. These walls are low in profile and do not obscure the house. Front yard fences are not common in these neighborhoods, but there is evidence of historic fences in the Belvin Street Historic District.
- E. The following guidelines are recommended:
 1. Retain the orientation of the house to the street. To change the entrance from the front would alter the pedestrian approach and rhythm.
 2. Removing or relocating the sidewalk from the street would break the rhythm of the neighborhood. Broken sidewalks should be replaced but the location should remain. The material should match the original or should be compatible with the house and the surrounding neighborhood. Materials such as stone, concrete or brick pavers, and decomposed granite are appropriate replacement materials and are not as harsh as large expanses of concrete.



Strong pedestrian approach (220 N Johnson Ave)



Retain orientation of house to street (921 W San Antonio St)

3. Driveway locations should not be altered if it affects the rhythm of the street. Materials that might be used for a driveway are gravel, pea gravel with a brick or metal edge band, pavers, concrete strips or “ribbons” and asphalt. Front yard circular drives are not appropriate to the neighborhood because they encroach on the setback and break the rhythm on the street.
4. The style of the house and the surroundings should be considered when thinking of any type of front yard fence. For example, an ornate Victorian fence would look out of place in front of a Craftsman style house.
5. Review the reason for wanting to install a front yard fence. Did one exist historically? Houses constructed in the 1880s had front yard fences to keep livestock from roaming into the yard. Houses built in the 1920s had no fences in the front yard, which reflected a “progressive” movement when fencing laws reduced the chance for roaming livestock.
6. Can the fence be installed at or behind the setback line?

Section C.3.2.6 Modern Conveniences and Amenities

- A. Historic homes offer charm and character not always found in current residential construction. As families grow and residents grow older, needs change. Air conditioning is a welcome relief from the heat and humidity in San Marcos. Additional rooms and bathrooms may be necessary as children get older. Steps may become impossible to maneuver with age or a disability.

The installation of a “no-step entrance” or ramp can maintain or prolong ones independence and mobility.

B. Adapting a historic home for modern use, while maintaining the homes original character, requires thoughtful planning. Weigh the safety and comfort concerns with that of historical accuracy, economic feasibility and long term impact. Ask yourself “How can this improvement or necessity be installed or removed without causing irreparable damage to the historic character of the house or neighborhood”.

C. The following includes some of the commonly installed amenities and additions to historic properties:

1. Carefully consider access ramps for temporary or long term disability, and the location and impact of the ramp on the house and neighborhood. The removal of a small section of railing on the side of a porch may be more convenient and less intrusive than to the front of the house. If the porch is not elevated, consider replacing the sidewalk with an incline to eliminate steps at the porch or door.
2. Air conditioning and electrical equipment should be installed in such a way that it will not damage important architectural features. Study possible locations for the equipment and install it where it is least visible from the street or can be screened with planting material.
3. Antennas and satellite dishes are considered a removable fixture but with some thought can be sited away from public view.
4. Chimneys are an important architectural feature and the removal or alteration of existing chimneys alters the historical integrity of the house.
5. Decks and patios can be compatible with historic houses if thought is given to location, proportion and materials.
6. Dormers are important to the composition of the roof and should not be eliminated. Scale and form should be retained. New dormers may allow for additional use of the attic, but should be designed to match the style of the original house.

7. Flags and banners are considered a removable amenity but care should be used when mounting to not damage the historic materials of the house.

8. Light fixtures located on the building exterior, porches, pathways and paved areas should be appropriate in design, scale and character of the house. There are many available adaptations of fixtures in various architectural styles. A Victorian light fixture is appropriate with a Victorian house but not appropriate with a Ranch or Craftsman style house.

9. Mailboxes and mail slots should be simple and as unobtrusive as possible. Mailboxes can be obtained in styles compatible with the time period of the house.

10. Shutters may be installed if they are in keeping with the style of the house and the period of construction. Shutters should be correctly proportioned to the width and height of the window and should be installed with hinges rather than nailed to the wall.

11. Skylights can add light to interior spaces and may make attic spaces more useable. If flat in profile and positioned away from public view skylights can be installed in older houses. Bubble dome skylights are not appropriate.

12. Storm/screen doors and windows can be installed without hiding the historic door and surrounding features. Metal framed doors and window screens are acceptable if selected with a white factory finished or painted the color of the door and window trim. Wood storm/screen doors and windows designed for the style of the house can be purchased at most lumber yards.

13. Orient garages away from the primary view and install single car doors instead of double wide doors.

D. As you formulate your ideas to modify and improve your home, questions will arise. There are many sources available for advice and assistance including a neighbor who has completed a similar project, the Texas Historical Commission, City Staff and the National Trust for Historic Preservation. Helpful resources can be found on the City’s website.

DIVISION 3: RESIDENTIAL BUILDING COMPONENTS

Front Door (727 Belvin St)

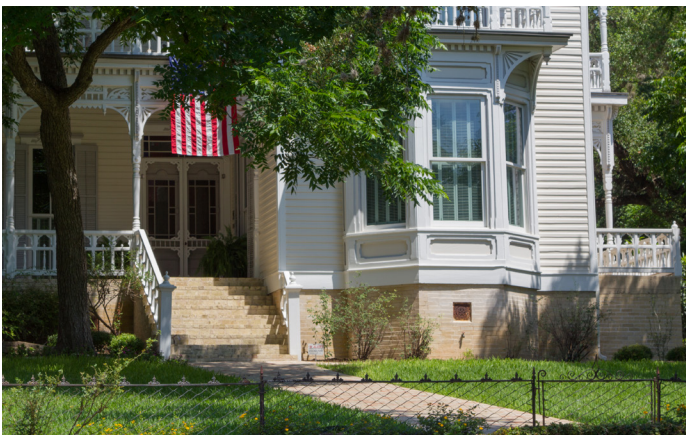


Roof Form (835 W Hopkins St)

Section C.3.3.1 Foundations and Skirting

- A.** Historic homes were not built on concrete slab foundations as the majority of houses are today. The majority of historic homes in San Marcos are wood frame construction with wood pier and beam foundations. The house is elevated above the ground because the beams supporting the house rest on a grid of cedar posts, brick or stone piers set into the ground. This creates a crawl space between the floor structure of the house and the earth.
- B.** Homes of brick and stone, along with a few wood frame houses, have brick or stone perimeter walls. More commonly, concrete block, which resembles stone, is used for perimeter walls. These houses have interior posts or piers as mentioned above. The perimeter walls support the house and close the space under the house, yet are designed with openings for ventilation.
- C.** Houses that have no perimeter walls close the crawl space between the floor of the house and the ground with a “skirt”. The design and detail of the skirt is defined by the style and time period of the house. For example, Victorian houses frequently have a distinctive ventilated skirt of vertical and horizontal wood strip lattice, while Craftsman houses frequently have a flared skirt of horizontal board siding that matches the body of the house. No matter what the style, all skirting must provide ventilation to avoid trapping moisture, which causes mildew and wood rot.
- D.** The following guidelines are recommended:
1. Foundations should be repaired before starting other repairs to a house. Leveling a foundation may cause a house to shift. The shifting usually adds to the damage that has already occurred from the house settling unevenly and cause additional damage to the roof and walls.
 2. The foundation posts may be replaced with new posts of cedar or chemically treated wood designed for in-ground contact. Concrete piers may be installed, since they have a longer life than wood posts. Floors can be leveled and additional supports may be installed at this time if needed. Select a reputable foundation contractor, before leveling a home.
 3. Both stone and brick foundations may have deteriorated or are missing mortar which requires repointing or replacing mortar. It is imperative to use mortar which is softer than the masonry to avoid accelerating the deterioration of the stone or brick. Ideally, the replacement mortar should match the original in composition and, if exposed to view, should match the color and joint type as well.
 4. Portland cement or masons mortar is harder than most historic masonry materials and should not be used.

5. The skirting may deteriorate over time and should be repaired or replaced if missing or badly deteriorated. The skirting should match the original in design and detail.
6. Skirting of solid materials such as brick or stucco are discouraged because it changes the historic appearance of the house and does not provide the essential ventilation required for pier and beam foundations.
7. Cement board siding may be an acceptable alternative for ground contact skirting if installed in a manner that reflects the original design, detail and dimension.



Brick perimeter wall supports house (832 Belvin St)



House is elevated above ground (810 W San Antonio St)



Wood lattice skirting (716 Belvin St)



Pressed metal skirting (323 Scott St)

Section C.3.3.2 Porches

- A.** Historically, the most dominant feature of a historic home is the front porch, which was used as an extension of the living space, contributing to the character of the street and the life of the neighborhood. The details of most porches in the San Antonio and Belvin Street Historic Districts are intact. The original character defining features and elements of their individual styles are still evident. Because most of the homes are constructed with pier and beam foundations, the porch floors are elevated above ground level. The newer slab-on-grade foundations have a porch at a much lower level.
- B.** Porches may require a great deal of maintenance because of their exposure to the weather but the removal or alteration of a porch will have a significant impact on the character of the house and neighborhood.
- C.** Some of the porches have been altered over time with more modern materials that require less maintenance. These alterations have changed the character defining features of the original design. Some of the common changes included the removal of wood columns and installation of fabricated metal porch supports; replacing wood steps with concrete or brick steps; removal of wood porch floors and installation of concrete or brick porch floors at a lower level than the original porch.
- D.** Another common alteration is the enclosure of porches to create additional living space, bathrooms and entrances.
- E.** Wood steps, porch floors, column bases and railings are usually the first things to deteriorate on historic porches because of their exterior exposure.
- F.** The following guidelines are recommended:
1. Keeping a porch and its corresponding features and details in good repair is far less costly than allowing deterioration to continue resulting in the major repair or replacement of large portions of the porch, details and structure underneath.
 2. Retain original material and make repairs that match the original design of the porch floors, columns, railings, brackets, steps and other character defining details.
 3. While the installation of concrete or brick steps does eliminate some of the maintenance of wood steps, it changes the character of the house. Concrete steps are normally not anchored to the original porch structure. Concrete steps pull away from the porch, sink or rotate unless the entire porch has been changed to concrete.
 4. A porch floor that has been lowered changes the step location to the front door, which can be awkward without a landing at the door. It also requires a change in the support of any columns the porch design may have had.
 5. If concrete or brick has been installed it must be removed prior to rebuilding a wood porch. New wood would deteriorate at a rapid rate because of the moisture condensation on the concrete and brick mass.
 6. If a porch has been drastically altered, or if there is no clear idea of what the original details were, look to a similar house for ideas regarding porch design.



A dominant front porch becomes an outdoor living room (714 W San Antonio St)



Porch is elevated (810 W San Antonio St)



Porches may be closer to ground (220 N Johnson Ave)

Section C.3.3.3 Exterior Wall Surfaces

- A.** The most common exterior wall material in the San Marcos Residential Historic Districts is horizontal wood siding of numerous profiles. Brick, stone, stucco and asbestos shingles were also used as the original wall surface material on some houses. Other siding materials found in the districts include decorative wood shingles which are frequently seen on gable end walls and on turrets. Board and batten siding, which is a vertical wood siding, is common for outbuildings.
- B.** The original siding material is still in place and visible on the majority of homes in the neighborhoods. However, some of the houses have been covered with brick, stucco or synthetic sidings such as asbestos, vinyl or aluminum.
- C.** The following guidelines are recommended:
1. The exterior wall surface material is an integral part of the original design, style and character of the house.
 2. Each material requires different types of maintenance, which can be referenced in the residential building materials section of this document.
 3. It is important to retain the original wall surface because of the character of its dimension, profile and shadow lines to each distinctive material.
 4. If the building was constructed with wood siding and needs repairs or board replacement, most siding types are still manufactured and available from suppliers or can be milled for a nominal set up fee. Many of the wood sidings have been on the houses for nearly one hundred years and may well last another hundred if properly maintained and painted.
- 5.** For the integrity of the neighborhood and the house itself, it is not recommended that any synthetic siding be installed over existing wood siding. The installation of synthetic siding changes the appearance of the house and conceals the original details. Additionally, synthetic sidings trap moisture in the wall causing deterioration of the historic material beneath.
- 6.** A property owner is not required to remove synthetic siding from a house which currently has such siding installed. However, the removal of newer siding or wall surface material and the repair of original siding and trim is encouraged. This would help return a building to its original character.



Horizontal wood siding is the most common exterior wall surface (716 W Hopkins St)



Retain original wall surface to retain character (727 W Hopkins St)

Section C.3.3.4 Exterior Doors and Entrances

- A.** Both San Antonio and Belvin Street Historical Districts have a wide range of entrances corresponding to the variety of housing styles. Even the simplest of houses has a well defined entry which faces the street. Homes constructed during the late 1800s and early 1900s usually have front doors with glass upper panels. Many have transom windows above the door and windows, also side lights, to the side of the door. A few of the older Victorian and Neoclassical houses have highly detailed door surrounds, a pair of doors in one opening and a single transom above.
- B.** A single round-arched doorway with a heavy solid wood door is commonly found on Tudor style houses while Italian Renaissance has an arched doorway with an elaborate door surround and entrance. Craftsman and Prairie style houses typically have doors with a pattern of small glass panels in the upper portion of the door. Bungalows often have two “front” doors leading from the porch and Modern styles have a simple single entry door.
- C.** It is important to recognize that each time period and style of house has a different type or style of entrance. If an entrance has multiple components such as glass panel doors, transoms and sidelights they should be retained but if an entrance simply has a door, adding decorative features will confuse the style and create a false sense of history.
- D.** The following guidelines are recommendations:
1. View the entrance as more than a door. Door frames, trim and surrounds help define the character and style of the house.
 2. Old doors can be repaired or, if badly damaged, can be replaced with an old door of similar design. Doors can also be copied and manufactured by a skilled wood worker.
 3. Readymade wood doors that are compatible in style and design are available.
 4. For improved energy efficiency install weather stripping to seal the edges of the door.
 5. Reduce air flow at the bottom of the door by installing a door sweep to fit snugly against the threshold.

- 6.** If a wood threshold is badly damaged, a new wood threshold can be milled by a lumberyard.



The entry doors and transom are in scale with the ground entry porch (227 N Mitchell Ave)



Single entry door surrounded by transoms and side lights (811 W Hopkins St)

Section C.3.3.5 Windows

- A. Windows play an important role in the character definition of the houses and the overall neighborhood. The proportion, material and organization of windows in the wall help to establish a construction date of the house. The detail of the window is frequently a key characteristic in identifying an architectural style.
- B. The majority of windows in the Belvin Street and San Antonio Street historic homes are the traditional wood, double hung, rope and pulley system. Many of the houses have a simple one over one configuration while others have multiple pieces of glass in a single window sash.
- C. A few houses were constructed with steel casement windows, which were a modern installation in the 1930s. These windows are not known for their energy efficiency, but can be maintained and made more efficient by installing a storm window on the inside of the house.
- D. The following guidelines are recommended:
 1. Original windows should be retained as they are a strong character defining feature on a house.
 2. It is not necessary to replace an entire window if only a portion is in need of repair. Consider replacing the deteriorated portion only. A single sash can be made to replace a deteriorated one.
 3. Proper window fit, weather stripping, new glazing compound at the glass, and sealant around window frames can improve the energy efficiency of wood windows substantially, while retaining its historical character.
 4. If windows are missing or if frames are deteriorated beyond repair, replace them with a window of the basic dimension and profile as the original.
 5. Imitation dividers or “snap-in” muntins that do not truly divide and hold pieces of glass should be avoided.
 6. Most aluminum windows are not considered an option and have not been proven to be more energy efficient than a well maintained wood window.

7. Replace original glass only when broken as the wavy quality of the historic glass adds to the character of the house. If glass is broken, attempt to replace with old wavy glass.



Tall narrow openings and glass in the sash help to establish a date of the house (716 Belvin St)



Example of different window configurations (832 Belvin St)



Window screens with detail appear on Craftsman and Prairie style houses (620 Rogers St)

Section C.3.3.6 Roof Form and Details

- A.** Roof forms and materials are an important feature in defining the character of the house and neighborhood. House styles and periods of construction influence the form of the roof. The simple gable roof form is found on Folk Victorian, Craftsman and contemporary styles such as Ranch. More complicated roof structures include a combination of hip, gable, dormers, turrets, towers and are found on Victorian style houses.
- B.** The shape and slope of a roof has a significant impact on how the building addresses the street. A gable roof which faces the street has a stronger presence and is more inviting than a gable roof that runs parallel to the street. In the case of the latter, the roof is sloping away from the viewer. The amount of slope, also known as the roof pitch, reflects the style of the house. Steep pitches are found on Victorian and Tudor styles, while lower pitched roofs are found on Ranch and Craftsman style houses.
- C.** Roofs are the one part of a house, which may need to be replaced rather than repaired. Roof repairs are often temporary and a new roof will be necessary at some point in the future. A roof leak may actually be a “flashing” leak around a chimney or vent pipe. Flashing is usually a metal material intended to seal the joint where the roof might have openings, such as vents, or connections to another part of the roof such as a dormer. For historical accuracy, replace the deteriorated roofing with a material that matches the original in composition and profile. A non-original roof that does not leak is better than an original roof that does. However, select an alternative that closely resembles the type of roof that might have been on another house constructed during a similar time period. In San Marcos it is not uncommon for one house to have multiple roofing materials. As roofing materials have deteriorated, they have been replaced with alternative materials. A house may have a standing seam roof on one portion and composition shingle on another.
- D.** Roof details vary from style to architectural style. Truly ornate details, such as consoles and dentils appear at the roof line of some Neoclassical and Victorian examples while very few roof detail appears on modest Victorian and Tudor styles. The one feature which appears on houses of all historic styles is the dormer. Dormers appear in different sizes, shapes and materials. Some have windows while others have attic vents but they help to provide visual continuity to the neighborhood and scale to the roof.
- E.** A variety of roofing materials have been installed in San Marcos. Composition shingle is the most common, economical roofing material. There are a variety of metal roofing materials installed, including historic standing seam metal to pre-furnished corrugated metal sheets. Clay tile is a character and style defining material with only one example in the Belvin Street Historical District. Several houses are covered with asbestos shingles or tiles which are no longer manufactured. These shingles have a distinctive dimension and profile and should be retained if possible. If replacement is necessary, there are composition shingles and concrete tile which closely replicate the asbestos material in pattern and profile. Another consideration might be to reinstall unbroken shingles to the roof which faces the street and install a composition roof of similar color to the less visible portions of the house. While asbestos shingles do not pose an environmental or health threat while used as a roof material, their disposal will be subject to special consideration. Check with local authorities for proper disposal sites.
- F.** The following guidelines are recommended:
1. Maintenance of the roof and flashing is important. In the event replacement is necessary, select a roofing material that is compatible to the design of the house.
 2. Maintain the original details of a house and avoid adding details that did not exist originally.
 3. If attic space is converted to living space, retain the original roof pitch when adding dormers and roof additions to avoid a “pop-up” appearance.
 4. Maintain the flashing where the roof meets the wall.



Complicated roof form and elaborate details indicate Queen Anne (727 Belvin St)



Victorian house has a simple gable roof and ornate details at the minor roof forms (724 Burleson St)



Simple gable roof is found on Craftsman houses (811 W San Antonio St)



Steeply pitched roofs are found on Tudor style houses (1207 Belvin St)

Section C.3.3.7 Color

- A. Color is an important component of a buildings style and character. Color is also the most emotional topic of personal taste and historic authenticity. To find the original color scheme of the house, scrape small areas of existing paint until you reach the first coat of paint or have a chemical analysis completed by an expert. When matching paint samples, it should be remembered that the original paint color probably faded before it was repainted.
- B. For a compatible historic color scheme, research the colors that were being painted in the historic areas of San Marcos. Then research the colors available in San Marcos at the time your house was built. This information can be obtained from paint manufacturers such as Sherwin Williams, Pratt and Lambert, or Benjamin Moore, just to name a few. If, for example, the paint color selected for the house was purple, a manufacturer would be able to tell you the year purple pigment was available for house paint.
- C. Paint colors vary according to style and time period of house. Style books offer traditional color schemes for houses of that style and period. Many paint companies have “historical” color charts that can offer some guidance. Color schemes should tie a building together and create harmony in the facade. Keep the neighborhood and surrounding houses in mind.
- D. Painted brick is not found on the houses of San Marcos and it would not be historically accurate to paint them. One reason

brick and other masonry materials were selected initially was to avoid the need for paint.

- E. Dark colors fade and “chalk” or get a white powder on the surface because of the South Texas sun. Historically paint had a flat finish without gloss or shine. A “satin” finish paint can provide the appearance of historic paint while providing the easily washed surface of a gloss finish. Many homeowners assume the house needs to be painted when it really needs to be washed. If mildew is the problem, wash the house with a mild bleach and water mixture to kill the mildew. Shade from trees, combined with the humidity of San Marcos, add to the possibility of mildew on painted surfaces.
- F. The preparation of the surface to be painted is an important step in painting. The surface should be scraped and sanded to remove any loose paint but it is not necessary to remove all paint down to bare wood. Make sure the wood is dry before applying a good primer and two top coats of paint. Use a brush for the best coverage instead of a sprayer.
- G. The following guidelines are recommended:
 - 1. Do your research when selecting paint colors for your house.
 - 2. Local paint stores can provide assistance in selecting or matching paint colors as well as recommending historic paint colors of the area.
 - 3. City staff can provide assistance in your research efforts.

DIVISION 4: RESIDENTIAL BUILDING MATERIALS

Section C.3.4.1 Brick and Concrete

- A. The Belvin and San Antonio Street Historic Districts have only two historic homes which were originally constructed of brick. Brick veneer is found on newer houses which have been built in the districts. Brick was the common material for chimney construction, and the chimneys usually had decorative brick detailing or corbelling. Due to weathering and extensive use of lime mortar many of the existing chimneys have loose or missing mortar. Brick is also occasionally found in foundations, and at a few locations brick has been installed as a paving material for sidewalks and entrance steps.
- B. Most of the brick construction found in the area is buff colored because of the clays found in and around San Marcos. In the late 1800s bricks were made from local clays and red clay was not available without excessive cost for transportation.
- C. Rough-faced concrete block, which resembles the look of stone, is used as a residential building material for skirt and wall construction, and for wall or fence construction around residential properties in both districts.
- D. The following guidelines are recommended:
 - 1. Retain and maintain the original brick or block material.
 - 2. Replace loose or missing mortar using a mortar of the same composition as the original. Mortar is important to the integrity of the brick wall.
 - 3. Avoid using mortar that is harder than the original mortar as it can cause deterioration of the historic masonry material. Historic mortar has a high lime content, therefore it is as soft or softer than the material it is joining. Do not use ready mixed masons mortar when repointing brick because it has a strong portland cement content and is harder than historic brick.
 - 4. Repair or replace flashing as needed to ensure a watertight connection between the chimney and the roof.
 - 5. Clean brick gently and avoid abrasive cleaning such as high pressure water blasting or other high pressure blasting material. Chemical cleaning may be required to

remove some stains. Consult a knowledgeable contractor or the Texas Historical Commission for more information.

6. Avoid installing brick or block where these materials were not originally used.
7. Avoid installing brick on the walls of a house that originally had wood siding. To install brick over wood siding changes the character of the house and can destroy the wood beneath.



Brick with stone accents (727 W Hopkins Street)



Brick used in sidewalk (716 Belvin St)



Rough faced concrete block (1024 W San Antonio St)

Section C.3.4.2 Metal

- A. The primary use of metal on historic residential homes in San Marcos was as a roofing or roof related decoration such as cresting and weathervanes. Standing seam metal roofing, which is found on many houses in South Texas, is evident in the historic areas of San Marcos. This type of metal roof was well adapted to odd shapes or projections. Historically, metal roofs were made by folding metal sheets together creating a vertical "seam". The pans were formed from Galvanized steel sheets in a sheet metal shop and could be designed to fit roofs such as turrets. The roofer turned the seams over and the seams were then soldered to form a watertight barrier.
- B. Pressed metal shingles were manufactured and installed as a roofing material in the late 1800s, and are seen on several residential buildings. These materials were also formed from galvanized steel and were premanufactured in St. Louis, Kansas City, and other large industrial areas. Pressed metal has been installed as a skirting material on some houses, but was probably not an original material.
- C. Corrugated metal roofs were also commonly used in Texas. As in standing seam roofs their limitation was due to the fact that lengths were limited to 8 feet which caused numerous end laps, and on larger houses increased chances of roof leaks. Corrugated roofing is found on houses, garages, barns, and other outbuildings. Newer sheet metal profiles such as "V" crimp and pre-finished metal standing seam have been added to older houses as repairs are made.
- D. Ornamental iron, although used during the period on commercial structures, was not commonly used for residential construction. Cast iron is not evident in the San Marcos Historic Districts.
- E. Metal windows were used in residential applications in the 1930s, and are evident on a few houses in the historic districts.
- F. The following guidelines are recommended:
 1. Replace deteriorated metal with new primed or pre-finished metal of the same or compatible material. Pressed metal shingles are still manufactured and can be replaced in localized areas as needed.
 2. Re-install decorative roof details, such as cresting, when replacing the primary roofing material.

3. Avoid installing an inappropriately scaled metal roofing material on a house that did not have a metal roof originally. Many of the current metal roofs have an industrial appearance and should be avoided.
4. Fabricated metal should not replace other materials such as wood columns.
5. Metal windows should not replace wood windows.
6. Avoid installing decorative metal iron work over windows that did not include them in the original design.
7. Avoid installing a pressed metal skirt where one did not previously exist.



One of many standing seam metal roofs in San Marcos (221 Johnson Ave)

1. Replace deteriorated stone with stone that matches the original in color and texture.
2. If a wall has deteriorated or is missing mortar it should be replaced with mortar of the same composition as the original in composition and color. Portland cement, or masons mortar is too hard and will cause the stone to deteriorate and crumble.
3. It is not recommended that stone be added to the foundation or face of a house because this changes the original integrity of the house.
4. Retain stone walls and drainage beds.
5. Use stone as a site design material such as walks, walls and planter beds.



Historic application with stone exterior (809 Belvin St)

Section C.3.4.3 Stone

- A. Stone is used most commonly in the two historic residential districts of San Marcos as a material for foundations and retaining walls. The stone was cut from locally quarried limestone block and was used in conjunction with a soft, lime mortar because of its natural softness. Field stone or rubble stone (stone not cut into a rectangular shape) was used in the construction of walls or curbs in front of houses. This stone, even though a harder consistency, was held together with a lime mortar. Similar stone was also used in the drainage beds of the water runoff systems in the area. Stone was not used as a veneer material or skin of the houses in the Belvin Street or San Antonio Street Historical Districts. However, several newer houses in the San Antonio Street Historical District are clad in various types and patterns of stone. In these two districts, only one historic home still in existence, had been constructed with stone as the primary exterior material.
- B. The following guidelines are recommended:

Section C.3.4.4 Stucco

- A. Stucco, also called cement plaster, is a hardened cementitious paste which is applied over a wire mesh or lath. It creates an exterior wall surface which can be made smooth or can have a sculpted texture. Stucco has no dimension or shape of its own but can be used to form many shapes.
- B. The historic districts of San Marcos have only a few stucco houses. This would have been a building material of the 1920's and 1930's and appears on Tudor style houses and as detail treatment on a few other examples. Small cracks are an

inherent property in stucco due to the shrinkage of the plaster. Small cracks can be concealed by applying an elastomeric paint which has the ability to stretch and return to its shape. Large cracks can be repaired and deteriorated or missing stucco can be replaced with stucco that matches the texture and composition of the original material.

- C. Stucco is a material to be used as the initial exterior wall surface of a building. It is not intended to be installed over another wall surface material. Installing stucco over a wood siding will cause the wood beneath to deteriorate and will change the overall appearance of the house by eliminating the original detail and shadows of the boards.
- D. The following guidelines are recommended:
 1. Retain and maintain original stucco.
 2. Avoid installing stucco over another material.

Section C.3.4.5 Wood

- A. Wood was the primary building material in residential construction in San Marcos. It was readily available, did not require the skills of as many craftsmen, and was used for structural elements as well as skin.
- B. The majority of houses built during this period on Belvin Street and San Antonio Street are covered with horizontal wood siding. Wood with a tapered profile is in clapboard or lap siding while a milled profile has a more decorative shape. Board and batten, which is a vertical siding, is commonly used on outbuildings such as garages, barns and sheds, and occasionally on small houses. Another common use of wood is decorative wood shingles used as a siding, which was relatively easy to use as a decorative feature on gable ends, turrets, or dormers. Patterns included fish scale, diamond, square cut, and rounded. Wood shingle roofs, although common, are not presently found on the historic houses in the two areas. This may be the result of previous replacement due to deterioration.
- C. Wood details are found on all houses from all styles and periods of construction. Victorian and Classical styles include ornate turned columns, spindles, box columns, columns of classical order, brackets, bargeboards, cut and turned frieze details, elaborate doors and door surrounds. Less ornate details of the Craftsman, Folk Victorian and Colonial Revival

styles include box columns, brackets and simple porch railings. Wood was the most common material used for porch flooring and is prone to decay because of the exposure to weather conditions. Flooring was usually a high quality wood that was painted on all sides and edges prior to installation to prolong the life of the wood.

- D. Wood is the primary skirting material on historic houses. Because houses were built above ground on posts and beams, a skirt was constructed from the floor level down to the ground. This skirting usually reflects the same siding profile as the house, was a wider horizontal board, or was a wood lattice, which allowed for ventilation. This wood lattice was commonly installed as a horizontal/vertical grid, rather than the wood lattice which is available today. Solid skirt materials must be vented to allow air to pass under the house and eliminate moisture from the foundation.
- E. The following guidelines are recommended:
 1. Retain and repair wood siding and details.
 2. Replace missing or badly deteriorated wood features with wood of the same dimension and profile.
 3. Refrain from installing synthetic materials over existing wood materials because they frequently cause the historic material to rot.
 4. Refrain from replacing a deteriorated wood feature with another material.
 5. Explore the use of epoxy wood repair materials in lieu of replacing an entire wood member. This has proven effective on rotted column bases, window sills and sash, etc.
 6. Replace rotted wood that is in contact with the ground with a chemically treated wood to prolong the life of the feature. This can be done on skirting and steps. Treated wood can be used to rebuild lattice skirting by cutting strips from standard treated 2x4 material. All treated wood should be thoroughly dried prior to installation.

Section C.3.4.6 Synthetic Materials

- A. With the advent of plastics and modern methods of forming materials, which were not available until after World War II, home owners have been influenced by the promise of

never having to paint or perform routine maintenance. In the late 1930's asbestos shingles were the first modern non-maintenance products which have been followed by aluminum siding, and vinyl siding for the main skin of a house. There are several houses in the historic districts which have asbestos shingle siding.

- B.** Asbestos shingles which were installed over existing siding have not been detrimental to the siding underneath because it breathes, whereas aluminum and vinyl are so air-tight they cause the siding underneath to trap moisture and rot. The installation of a foam insulation before the vinyl causes even greater damage because all moisture is sealed into the siding envelope. Asbestos siding is only hazardous if it is removed, and then special disposal precautions must be observed.
- C.** Houses within a historic district which may have a synthetic material applied to them may retain the synthetic material without penalty. However, they would not qualify individually for State or Federal Historic designation.
- D.** Stucco is not a synthetic material, except in the most recent advent of so-called stucco which is man made as an insulating and finish system. Stucco does not appear to be a commonly used material in San Marcos, although there are a few examples.
- E.** The following are guidelines are recommended:
 - 1. Retain and repair the original building material of a house.
 - 2. Replace only that material which is beyond repair.
 - 3. Replace deteriorated material with compatible new material.
 - 4. Avoid installing any synthetic building material on top of existing wood. Many of these materials can trap moisture in the wall which will cause the wood beneath to deteriorate. It can also trap moisture in the insulation which reduces the effectiveness of the insulation.
 - 5. Avoid installing synthetic siding on top of existing siding as a means of "modernizing" the house or attempting to make the house more energy efficient. This changes the character of the original design and frequently destroys the character defining features of the house and neighborhood.

- 6. Such details as corner boards, window and door surrounds, gable vents and rafter ends are often changed or eliminated when the installation of synthetic materials occurs.
- 7. Avoid installing stucco over existing materials for it too changes the original design and can cause deterioration beneath.
- 8. Avoid the use of synthetic stucco materials because they cause rapid deterioration of the wood beneath.
- 9. Avoid installing "wood grained" materials. Wood used in historic houses was smoothly sanded with no obvious grain.



Asbestos shingles were used in the 1930s and 1940s as siding (1107 W San Antonio St)

ARTICLE 4: HISTORIC DISTRICT SIGNAGE

DIVISION 1: GENERAL

Section C.4.1.1 Purpose.

- A. The purpose of this Division is to explain the guidelines used by the Commission in determining appropriate sign design, construction, and installation in the Downtown Historic District
- B. Design is a subjective art. This Division is not intended to limit creativity, but to provide a frame of reference within which to work. Its purpose is to protect the District's character, while allowing for the legitimate needs of commerce. Types of signs, lettering, materials, and colors are explored.
- C. Nothing in these guidelines is intended to supersede the requirements of the Land Development Code pertaining to signs.

Section C.4.1.2 Premise

- A. The unique historical character of the District is primary in importance; the sign is considered secondary. A sign should be designed to integrate with the architectural features of the building. In short, a sign must complement the character of the Historic District, rather than detract from it.
- B. In designing a sign for placement in the Downtown Historic District, it is important to keep in mind the above premise by which the Historic Preservation Commission operates and reviews Certificates of Appropriateness for signs.
- C. The Commission believes signs that conform to these guidelines and are visible from both the sidewalk and street will satisfy the legitimate needs of commerce without visual clutter, and without obstructing the view of the buildings.
- D. The appeal of restored turn of the century commercial architecture draws customer traffic to the Historic District. Signs that detract from the overall character of the District only serve to lessen the positive impact of the many millions of dollars of public and private reinvestment since the Historic District was designated in 1986.

Section C.4.1.3 Procedure

- A. Obtain a Certificate of Appropriateness application and a Sign Permit application from the City's Planning and Development Services office or online at sanmarcostx.gov. The Planning Department will assist you in completing the application, and will place it on the agenda for the next available meeting of the Historic Preservation Commission. The meetings are usually held once a month at 5:45 p.m. in City Hall.
- B. In addition to a completed application, the applicant must submit the following:
 - 1. A scale drawing of the proposed sign;
 - 2. A rendering of the sign's placement in relation to the building; and
 - 3. Sign material and color samples.
- C. The applicant or representative presents the request to the Commission during a public hearing. Property owners within 200 feet are notified of the public hearing and invited to respond to the request. After review, the Commission will: approve the project as submitted; approve with conditions; recommend changes; or reject the proposal and issue a written statement of the reason(s).
- D. Once the Certificate of Appropriateness is approved, a sign permit may be issued. These steps must be completed before the sign is installed. Separate building permits may be required, depending on the scope of work. Building Inspections will inspect the project after completion to ensure that the work is in compliance with the permits.

Section C.4.1.4 Guidelines

These Guidelines present rules and suggestions for sign type, placement, lettering size, color, and material. They were developed specifically for the San Marcos Downtown Historic District.

"Guidelines" are not as strict as the standards of city code. The Commission may interpret them with some flexibility, and one guideline may be relaxed to facilitate another determined to be more important in a particular case. The overall objective is to ensure that the spirit and intent of the guidelines are followed.

In this section, general rules pertaining to a particular sign element will be explained. The Commission has attempted to clarify rules through graphic illustrations when available.

It was the Commission's intention from the beginning to accentuate the positive. Accordingly, in most cases, pictures are utilized to show elements of sign design that have been well executed. Some photographs have been selected to illustrate the use of signs in a manner that would not be considered appropriate for the District. That is not to say that the sign or its use is universally inappropriate, only that it is so for our purposes here.

The nature of design dictates that every proposal be evaluated on its own merit, and balanced with the actual experience on which these guidelines are partly based.

Section C.4.1.5 Design

Design is the orchestration of letter styles, colors, materials, size, placement, and originality into a unified graphic expression. Although design can be subjective, our desire is to help the business owner achieve a quality design that is consistent with the Historic District. The designer must keep the integrity of the architecture and District character foremost in the final product.

- A. Placement.** Placement should be the first consideration in a historic district. Upon deciding on wall mount, awning, or other, the design can be arranged within certain parameters. Signs should not obscure or compete with architectural details of the building.
- B. Size.** Size will be determined by architectural constraints. Proper proportions are crucial. Attached signage is limited to 10% of the building façade by the Land Development Code.
- C. Copy.** The business needs to be adequately identified; but too much information reduces legibility.
- D. Lettering.** Choose simple letter styles and colors that can be easily seen and read. Sign colors should complement the building colors.
- E. Impression.** The design of your sign will usually be the first impression that your business makes. Choose a designer carefully and require the level of quality your business and San Marcos deserve.

Section C.4.1.6 Sign Types

Types of signs addressed here include primary, secondary, temporary, and freestanding. Not all types are suitable or allowed in the Downtown historic district.

- A. Primary Signs.** A primary sign is the sign designed to be viewed from the street on a daily basis. It will represent the owner's largest sign expense and is likely the most important of the sign types. Only one primary sign is allowed per business.
 1. The primary sign should effectively project the business identity, without detracting from the building.
 2. Avoid too much information. The viewer will spend only a few seconds looking at the sign.



- A. Secondary Signs.** Secondary signs are utilized in addition to the primary building sign. Typically, a secondary sign will be in a window, hanging under a canopy, or affixed to the side of a

corner building. Where a secondary sign is affixed to the side of a corner building, it should not be greater in size than the primary sign.

1. Secondary signs may be targeted to the pedestrian, while the primary sign is intended to be viewed from the street.
2. The secondary sign may deal with the details of business operations, such as hours. This is especially true in the case of window signs.
3. Secondary signs in the form of hanging signs are especially helpful when the primary building sign is not visible from the sidewalk.
4. The use of hanging signs is encouraged.



B. Temporary Signs. Temporary signs and banners are regulated by the City's Land Development Code. No permit fee is charged for a temporary sign, but an information sheet must be turned in to the Planning and Development Services Department showing the size, location, date of installation and length of display. Please reference the City of San Marcos Sign Ordinance for standards on temporary signs. The Historic Preservation Commission encourages that:

1. Temporary signs and banners may not cover significant architectural details.
2. Signs of a temporary nature will not be permitted as permanent signs.
3. The Commission will review temporary signs which appear inappropriate for the Downtown Historic District, and may request that such signs be removed.

C. Freestanding Signs. Because building coverage is maximized in the Downtown area, and setbacks minimized, it is unlikely a freestanding (pole) sign could be erected in the historic district. Any proposal would need to meet the location and setback requirements of the Land Development Code, as well as the design criteria for a Certificate of Appropriateness. Such requests will be addressed on an individual basis.

Section C.4.1.7 Sign Placement and Size

A. General. Placement or location of signs is perhaps the most critical factor in maintaining the order and integrity of the Downtown Historic District. The size and shape of a sign should be proportional with the scale of the structure. Signs should be designed so that they are integrated with the design of the building. The Land Development Code shall further govern sign standards.

1. A general rule of thumb for maximum sign size is 1.5 square feet for every one foot of façade width, subject to the maximum allowed by the sign ordinance. For instance, a building that is twenty feet wide could accommodate a sign of thirty square feet: $20 \times 1.5 = 30$. This does not mean that the sign should always be as large as the general rule allows. Total signage on a building may not exceed 10% of the façade area.
2. Signs should not obscure or compete with architectural details of the building façade. The sign should be designed to integrate with the architectural features and not detract from them.
3. A frieze, or horizontal band across the building, is an appropriate sign location. When utilizing the sign frieze, it is important to respect its borders. The sign should not overlap or crowd the top, bottom, or ends of the frieze. This is also referred to as the Sign Band.
4. Window signs are included in the 10% overall maximum sign area, regardless of whether or not they require a permit. Internally illuminated canister signs and stock trade name signs are inappropriate for the district.
5. Awning or canopy signs must conform to the same size requirements as signs attached directly to the building; that is, 1.5 square feet for every one foot of façade width, up to a maximum of 10% of the façade area.
6. Signs in multiple tenant buildings should be designed to complement the other signs on the building.

B. Wall Signs

1. Turn-of-the-century buildings often have a sign frieze.
2. This is the ideal location for the sign. It is typically above the transom and below the second floor window.
3. Signs should not obscure or compete with architectural details of the building.



Good Examples



Good Example - When multiple tenants work together, their signs can be coordinated. The look is uniform, yet each has its own style.



Poor Example - this sign is out of scale with the building and covers details.

- C. Window Signs.** Window signs should be limited to 30% coverage of the glass area. These signs are included in the overall 10% of façade calculation.



Good Example



Poor Example - too much coverage

- D. Projecting Signs.** Primary projecting signs must provide a minimum clearance of 9 feet between the sidewalk surface and the bottom of the sign. They may not extend closer than 18 inches to the curb, or above the peak of the roof. The size is limited to 10% of the façade.



Good Example



Poor Example - sign extends above the building roof

- E. Hanging Signs.** Hanging signs must provide at least 8 feet clearance above the sidewalk. They should be sized in proportion to the space allocated.



Good Example



Good Example

- F. Awning and Canopy Signs.** Awning or canopy signs should conform to the same size standards as signboards; that is, 1.5 square feet for every one foot of façade width, but no larger than 10% of the total façade.



Good Example

G. Sign Lettering.

The style, size, and spacing of letters determine whether a sign is easy to read or confusing. Selection of lettering should be based on readability and the desired image projected by the sign. Flamboyant or intricate lettering may be attractive, but it can also be difficult to read. Because the objective of a good sign is to have its message read quickly, clear and simple lettering is best.

- 1. Style.** There are three basic types of lettering: decorative, serif, and sans serif. Generally, decorative styles such as Gothic, Old English, or script are too complex to be easily read on a sign. Serif and sans serif styles are easy to read and simple enough to be appropriate for many periods of architecture and types of signs. The difference between the two type styles is the small spur of “serif” attached to each letter. Lettering without spurs (“sans serif”) is perceived as more modern. Serif lettering gives a formal, decorative appearance that is timeless enough for all kinds of businesses and signs. Either style is suitable today.
- 2. Size.** “The bigger the better” does not always apply to lettering. Letter size must be proportionate to the sign area. Background and border space is needed so the sign does not appear crowded.
- 3. Spacing.** The spacing of letters is a matter of proper judgment; an experienced designer should be consulted in this regard. The important elements are inter-letter, inter-word, and inter-line spacing. Sufficient “air space” increases readability.

This business owner obtained old photographs of his building, and patterned his sign after the one installed in 1906. Initially, there was concern that the lettering size was excessive, but historic documentation showed the building was large enough to accommodate it. Air space around the borders keeps the sign from appearing too crowded.



Section C.4.1.8 Sign Color

- A. **General.** Color is one of the most important aspects of visual communication. It adds richness to every environment. However, too many colors may confuse or negate the message of a sign. Use discretion. An otherwise well-planned sign may look unattractive due to poor color selection.
- B. **Purpose.** Color can establish a unity among buildings of different scale, shape, or texture. Attention to this will make your sign part of an entire setting rather than an awkward element that is obviously added on. This integration is what gives the district a cohesive image. Choose colors related to the building facade or surrounding environment.

- C. Limit the number of colors used in any one sign. Small accents of color make a sign unique and attractive, but the competition of many different colors diminishes its effectiveness.
- D. **Contrast.** Contrast is an important factor in your sign's legibility. Light letters on a dark background are most legible, particularly when the sign size is constrained. This background isolates the individual message and, in areas where signs are numerous, greatly increases readability of each sign.
- E. Traffic signs, now standardized throughout the country, are a good example of effective contrast between letters and background. The principles that guide the development of traffic signs apply to commercial signs as well, except that commercial signs can use a wider range of colors and letter styles.
- F. **Accents.** Because most buildings are fairly neutral in color (earth tones, brick and stone, or muted paint), bright, intense colored signs draw attention away from the building. The sign can be the best place to add a splash of lively color to the overall paint scheme of a building, but care should be taken to ensure that the sign colors complement and relate to the building, creating a visually coherent storefront.



Good Example - sign color complements the paint scheme of the building



Good Example - sign color complements the paint scheme of the building

Section C.4.1.9 Sign Materials

Signs are fabricated from many materials: wood, metal, glass, plastic, stone, concrete, and even cloth and paper in certain circumstances. While there is nothing inherently wrong with any of these materials, they are not all appropriate for use in the Historic District. Even appropriate materials, used in an insensitive manner, can diminish the visual appeal of the District.

- A. Wood.** Wood is the most traditional sign material. This is due to its near universal availability and great versatility. With simple tools and methods, wood can be carved, formed, incised, glued, painted on, or worked in relief. With more elaborate equipment, wood can be routed and sandblasted. Wood has a variety of grains, textures, and colors, which may be emphasized to decorative advantage or concealed. In most cases, wood or signboard is utilized in the District because of its availability and suitability for painting and mounting.
- B. Metal.** Metal is also a traditional sign material. It can be formed in a variety of ways – etched, embossed, cut, cast, wrought, rolled, or extruded, making it a versatile material. It has the advantage of being very durable and, particularly in the case of aluminum, needs little maintenance.
 1. Some disadvantages to metal signs are that they can dent easily, changing the surface and damaging protective finishes. Rust and corrosion are common problems with metal signs.
 2. Gold-leafing and silver-leafing are another way in which metal can be used in sign fabrication. These materials carry an image of quality and elegance, and are most

effective when used in strong contrast to the color and texture of the background material. The reflective ability of the gold and silver enhance the play of light on the surface of the sign, adding to its visual appeal.

- 3. Metal is often used in fabrication of sign brackets, both simple and ornamental.
- C. Glass.** Glass, too, is a traditional sign material. Stained glass has a long history in display and, when carefully crafted, can make a rich and delightful sign. The most common use of glass as a sign material is the display window. Objects and activities observable within a shop are, in effect, signs. At the pedestrian level, window displays have far more potential for expressing the identity of the business than the signs mounted on the building. Window display signs are used extensively in the District.
- D. Plastic.** Plastic as a sign material is discouraged in the District. Internally illuminated plastic box signs are not allowed. There are some cases where the Commission will consider the use of plastic for a sign, however, such cases are rare, and the justification must be compelling. New techniques of working plastic may result in appropriate signage. Requests will be reviewed on a case by case basis, and money should not be invested prior to approval.
- E. Neon.** Neon, a sign material as well as a means of lighting, is now generally considered “historic.” When used properly, neon can create a lyrical quality that few other materials can duplicate. It is often used to complement art deco architecture.
 1. The appropriateness of neon will depend on its application, and each proposal must be reviewed individually. In considering neon, keep the overall design and color scheme simple. Stock trademark signs are not appropriate for window display in the District.

Section C.4.1.10 Sign Lighting

- A.** Light, like color, can provide more effective visual communication. However, when used inappropriately, it can produce visual irritation and detract from the character of the building. Signs should have lighting only when necessary. A well-designed window display illuminated at night is far more desirable than an illuminated sign.

External Illumination is the preferred method in the Downtown District.

- B. External Lighting.** A projected light source, either above or below the sign, is recommended if lighting is necessary. Projected lighting emphasizes the building as well as the sign so the sign becomes an integral part of the façade. This is not so with internal illumination. Use small, unobtrusive fixtures that do not overpower the sign or structure. Fixtures should be shielded to prevent glare on the street and sidewalk.
- C. Internal Lighting.** Internal lighting in general is considered inappropriate in the District because it places emphasis solely on the sign. Neon may be considered as an exception as discussed under Sign Materials. Internally illuminated cabinet (box) signs are no longer allowed. Those in place prior to adoption of the Historic Preservation Ordinance still remain, but may not be replaced. In interpreting the intent of these guidelines, the Commission may determine that under a certain circumstance internal lighting is appropriate. Individually illuminated letters, either internally illuminated or back-lighted solid letters (reverse channel) would be the only acceptable options. If approved, electrical transformer boxes, conduit, and raceways must be concealed from public view. When illumination is required, external lighting is encouraged.



Good Example



Good Example

ARTICLE 5: STANDARDS FOR GUIDELINES FOR SUSTAINABILITY

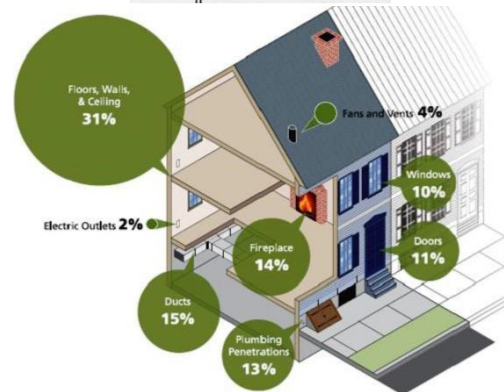
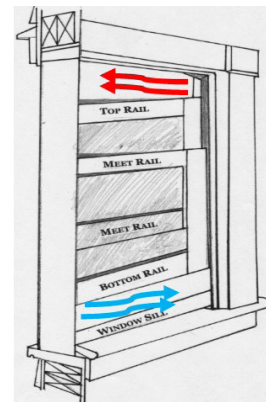
Section C.5.1.1 Introduction

- A.** Design and construction of historic structures maximized the use of natural resources such as light and ventilation. This Division will explore old and new techniques to assist you in maintaining your home and provide additional energy efficient options. These techniques and options will allow your home to operate efficiently while maintaining its character defining features. Proof of an Energy Audit from the City of San Marcos' Conservation Coordinator is recommended prior to undertaking the following techniques. The least visible improvements shall be undertaken first. The more visible improvements should only be considered once the least visible improvements have been completed.
- B.** All exterior work visible from the right-of-way requiring a building permit requires a Certificate of Appropriateness and must conform with all of City of San Marcos ordinances. It is helpful when using these guidelines to be familiar with your architectural style.

Section C.5.1.2 Wood Windows - Maintenance and Efficiency



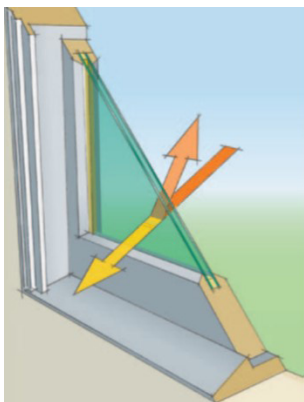
- A. General.** The US Department Of Energy estimates that windows account for roughly 10% of a structure's air loss. Three basic steps can be taken to reduce the amount of air loss through the window unit; maintenance and the installation of Low-E film and storm windows.



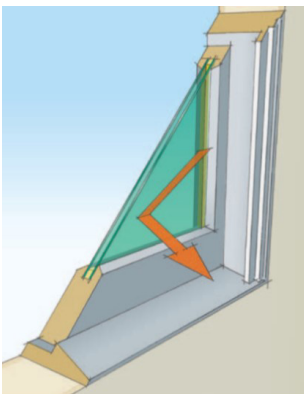
- B. Maintenance, Weather Stripping and Caulking.** Maintaining windows on a regular basis to ensure that they operate properly will significantly reduce the amount of air loss. This includes replacing rotten wood, painting, and adding weather stripping and caulk. Weather stripping should be used between the movable parts of a window. It can easily become ripped, torn, loose, bent or otherwise damaged so follow the manufacturers instructions for installation and routinely inspect and replace if needed. Caulk and other sealants can be used on the exterior

of your building where different materials meet or where expansion and constriction occur.

- C. Low-E Film.** A quick and inexpensive fix is to apply Low-emissivity film (Low-E). This can reduce your window energy loss by 30% to 50%. In warmer climates the film should be applied to the exterior of the window pane to reflect solar radiation out. In cooler climates the film should be placed on the interior of the window pane. So heat is reflected back into the house. The film can be purchased at your local hardware store and has a lifespan of approximately 10-15 years.



Windows with Low-E coating reflect back part of the summer sun. IMAGE SOURCE: Energy Savers, U.S. Department of Energy.



Windows with Low-E coating reflect back part of room's heat. IMAGE SOURCE: Energy Savers, U.S. Department of Energy.

- D. Storm Windows and Doors.** Storm windows can be installed either on the interior or exterior of the structure to increase the thermal performance of your window. The addition of a storm window to a single pane window will have an energy rating close to that of a double pane replacement unit. Storm windows avoid the irreplaceable seal failure on insulated glass units (IGUs). The typical life span of an IGU is approximately

25 years. Storm windows can also be purchased with a Low-E coating. Storm windows and doors should not be installed in locations where they damage or conceal significant features and should fit the opening.



Section C.5.1.3 Shutters

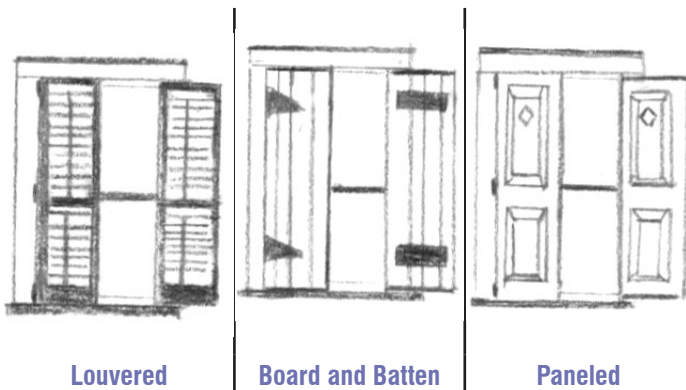
- A. General.** Historic windows are recessed within the wall of the structure. This allows for either a shutter or a screen to sit within the frame of the window unit. When the shutter is closed it creates a flush condition that provides protection from storms and intruders. Exterior shutters, historically have been used to provide privacy and security while controlling light and air circulation. For this reason, all shutters shall be operational (hinged). The style of shutter is dependent upon the architectural style and not all styles can accommodate shutters. Styles that cannot accommodate shutters can accommodate wood screens and awnings on the exterior and blinds on the interior.

B. Shutter Types

- 1. Louvered.** Provide the most control for light and air circulation. They can be closed and locked, with the louvers open. This provides protection from rain and security while allowing light and air in. Louvered shutters are appropriate for all style of homes.
- 2. Board and Batten.** Are vertical boards, usually beaded tongue and groove, fastened by horizontal battens. They

provide security but do not allow for the control of air circulation and light. They are appropriate for Arts and Crafts style structures, with or without a decorative cutout and Tudor style structures. They are NOT appropriate for Victorian style structure.

3. **Paneled.** These shutters have panels and don't afford much control of air circulation or light infiltration. They are appropriate for Arts and Craft style structures, with a decorative cutout, and for ground floor commercial Victorian style structures, without a decorative cutout.



Section C.5.1.4 Screens for Doors and Windows

- A. **General.** Screening became popular in the 1880s and remained popular throughout the United States. It fell out of favor as air conditioning became affordable. During the beginning of the 20th century it was so popular that a 1930 survey from The Journal of Home Economics ranked window screening as the third most important "household appliance" behind running water and sewage disposal. Screen doors can be simple in design or can match the style of the main structure. Paired and ribbon windows will not accommodate shutters; however, wood screens can be installed to help control light and air circulation. Screens also provide some protection from rain and sun. Screens can be combined with shutters. Structures that have shutters located on the exterior will have screens located on the interior; while, windows that can not accommodate shutters will often have screens on the exterior with blinds on the interior.
- B. **Solar Screen.** Solar screening is more opaque than traditional screening. This allows for more privacy while still allowing for air circulation. It will reduce the amount of light infiltration, by reflecting the sun's rays and because of its thickness it will

help to trap heat in the winter months. The reflection of the sun ray's will also extend the life of your window unit.

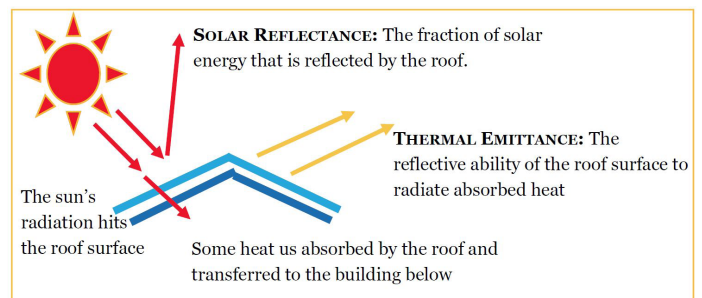


Section C.5.1.5 Cool Roofs

- A. **General.** Cool roofs reflect and emits the sun's heat back into the sky instead of transferring it to the structure. Their average energy saving range from 7-10%. There are several different types of cool roofs. They range from coatings for metal roofs and flat roofs to reflective granules on asphalt and other synthetic shingles.



Cool Roofs come in three colors in asphalt/ fiberglass shingles. They are typically lighter and more reflective than traditional roof shingles.

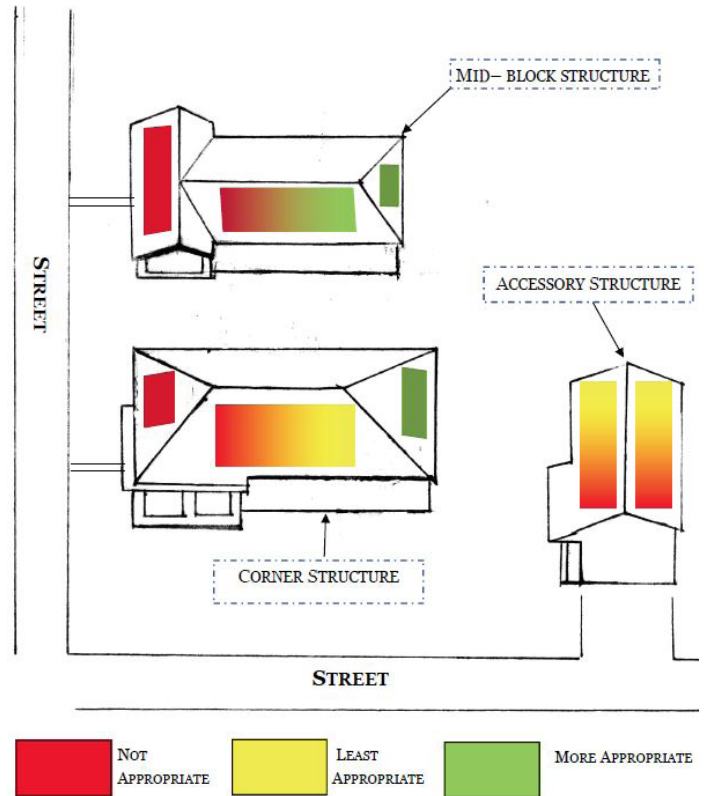


Section C.5.1.6 Solar Panels

A. General. Prior to installing solar technology on-site, try improving the energy efficiency of the structure through other passive methods such as awnings, and screens. When placing solar panels on-site, consider the impact that the technology will have on the historic character and fabric of the site. Consider the following locations prior to requesting the installation of solar technology on historic structures:

1. Pole mounted below the fence line
 2. Non-historic structure on the site
- B.** If the desired energy efficiency cannot be achieved in the above locations then consider the following location:
1. Historic Accessory Structures
- C.** If the desired energy efficiency cannot be achieved by placing solar technology in the above three areas, and the technology must be placed on the historic structure, then the following locations should be considered in the order listed below.
1. Non-visible roof slope
 2. Rear roof slope
 3. Rear portion of side or secondary roof slope
 4. Side or secondary roof slopes
 5. Front or primary roof slope
- D.** In addition, solar panels installed on the main structure should conform to the slope of the roof and not extend past the ridge line or eave line of the roof. Note, that solar panels may be permissible if visible only along an alley.

Most and Least Appropriate Locations for Solar Panels



Section C.5.1.7 Additional Resources

- A.** NPS Preservation Brief #3 Improving Energy Efficiency in Historic Buildings
- B.** NPS Preservation Brief #9: The Repair of Historic Wooden Windows
- C.** NPS Preservation Brief #44: The Use of Awnings on Historic Buildings: Repair, Replacement and New Design
- D.** The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings
- E.** The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings
- F.** Energy Savers, US Department of Energy
- G.** National Trust for Historic Preservation's Preservation Green Lab

- H. National Trust for Historic Preservation's "Repair or Replace Old Windows: A Visual Look at the Impacts"
- I. National Trust for Historic Preservation's "Energy Advice for Owners Historic and Older Homes"

Section C.5.1.8 Sustainability Standards

- A. Proof of an Energy Audit from the City of San Marcos' Conservation Coordinator is recommended prior to undertaking the following techniques. The least visible improvements shall be undertaken first. The more visible improvements should only be considered once the least visible improvements have been completed.
- B. Desired locations of solar panels shall be: pole mounted (not visible above fence line), rear roof slopes and rear portion of side (secondary) roof slopes, alleyways, and the least visible portion of non-historic accessory structures.
- C. Solar panels located on front roof slopes or primary roof slopes shall only be permitted provided that they increase energy production by more than 10%.
- D. Solar panels shall conform to the slope of the roof.
- E. Solar panels shall not extend above the ridge line of the roof.
- F. Shutters shall be operational (hinged) and fit the opening.
- G. Shutters on paired or ribbon windows are prohibited.
- H. Vinyl and metal shutters are prohibited.
- I. Storm doors and windows shall not damage or conceal significant features and shall fit the opening.
- J. Screen doors and widows should be made of wood and shall not damage or conceal significant features and shall fit the opening.
- K. Metal screens or storm doors and windows shall have a factory painted finish or shall be painted to match the window frame or sash.

ARTICLE 6: DEFINITIONS

1. **Appurtenant features.** accessories which define the design of a building or property. These include porches, railings, columns, shutters, steps, fences, attic vents, sidewalks, driveways, garages, carports, outbuildings, gazebos, arbors, ponds and pools.
2. **Arches.** a curved opening in a wall, usually constructed of stone or brick, as in the top of a window opening.
3. **Awning.** a roof-like covering of canvas or rigid material over a window or a door to provide protection. Similar to a canopy providing a covered area.
4. **Awning Sign.** a sign painted on or applied to an awning or canopy, or a sign made by removing material from an awning.
5. **Band course.** a horizontal element, usually of masonry, dividing upper and lower portions of the building, but unifying the facades.
6. **Balustrade.** an entire railing system (as along the edge of a balcony or porch) including a top rail and its balusters, and sometimes a bottom rail.
7. **Barge board.** sloped boards at the edge of a projecting overhang at the gable end; often decoratively carved or scrolled.
8. **Base.** lower part of a column or pier, wider than the shaft, and resting on a plinth, pedestal or podium.
9. **Base course.** a foundation or footing course, as the lowest course in a masonry wall.
10. **Bay.** a regularly repeated space created by the structure of a building.
11. **Board and Batten Siding.** a siding consisting of long vertical boards and thin strips, or battens; the battens are used to conceal the gaps between the siding boards.
12. **Box column.** a hollow, built-up column constructed of wood, which is rectangular in shape.
13. **Boxed eave or box cornice.** a hollow cornice, built up of boards, moldings, shingles, etc.
14. **Brackets.** projecting support members found under eaves or other overhangs; may be plain or decorated.
15. **Brick corbel.** a series of masonry units, each stepped progressively forward with the height to create a cornice or decorative element.
16. **Brick course/pattern.** the way in which brick is laid in a building.
17. **Bungalow.** a one-story frame house, or a summer cottage, often surrounded by a covered veranda usually expressing materials in their natural state. The forms are usually low and broad and lack applied ornamentation.
18. **Capital.** the topmost member of a column, usually decorative.
19. **Carriage blocks.** a stone block originally used to step into a carriage or used in mounting a horse.
20. **Casement window.** a window having at least one sash which swings open along its entire length; usually on hinges fixed to the sides of the opening into which it is fitted.
21. **Cast iron store front.** the front of a commercial building that is made up of prefabricated cast iron parts.
22. **Certificate of Appropriateness (COA).** indicates that a project has been reviewed by the Historic Preservation Commission and is deemed appropriate for the local historic districts. The review must be conducted in a public hearing.
23. **Clapboard siding.** a wood siding commonly used as an exterior covering on a building of frame construction; applied horizontally and overlapped, with the grain running lengthwise; thicker along the lower edge than along the upper.
24. **Combination hip roof.** a composition of more than one hipped element at the roof or a combination of hipped and gable roof form.
25. **Composition Shingles.** shingles made from a mixture of binder materials with fibers, also called asphalt shingles.

- 26. Concrete street marker.** a cast concrete marker found in the parkway which, like a street marker, designates W. San Antonio Street.
- 27. Console.** a decorative bracket in the form of a vertical scroll, projecting from a wall to support a cornice, a door or window head etc.
- 28. Contributing property.** a property that is fifty years old or older which contributes to a district's historical significance through location, setting, design, construction, workmanship, or association with historical persons or events, based on guidelines set forth by the National Parks Service in the National Register of Historic Places Criteria for Evaluation.
- 29. Corbelled Chimney Cap.** a brick or stone capping at the top of a chimney that has a series of projections, each stepping out further than the one below it.
- 30. Corner Block.** a square block used to trim casing at the upper corners of door or window surrounds; typically decorated with a milled bull's eye, known as rosettes.
- 31. Corner board.** a trim board used at an exterior corner of a wood-frame structure.
- 32. Cornice.** a molded projection or masonry which crowns or finishes the top portion of a building wall.
- 33. Craftsman.** an architectural style, inspired by the Arts and Crafts movement of the early twentieth century, reflected attention to detail. The low pitched roof forms have wide exposed overhangs and roof rafters. Porches with box columns or tapered box columns extend one full side or wrap a corner of the house.
- 34. Cresting.** a decorative element located at the top of a parapet or roof ridge.
- 35. Cut stone.** finished stone block which have been shaped by cutting.
- 36. Dentils.** one of a band of small, square, tooth like blocks found in a series on cornices, molding etc.
- 37. Divided Light Sash.** a window with glass divided into small panes.
- 38. Dormer.** a vertical window which projects from a sloping roof.
- 39. Double hung windows.** a window having two vertically sliding sashes, each closing a different part of the window; the weight of each sash is counterbalanced for ease of opening and closing.
- 40. Drainage beds.** stone lined ditch used to transport water runoff.
- 41. Drop Siding.** a type of wood cladding characterized by overlapping boards with either tongued and grooved or rabbetted top and bottom edges.
- 42. Escutcheon.** a protective or ornamental cover plate, attached to a wall with a hook or eye to hold a canopy support.
- 43. Exterior features.** the architectural style, general design and general arrangement of the exterior of a building or other structure, including the kind and texture of the building material and the type and style of all windows, doors, light fixtures, signs, other appurtenant features and Heritage trees. For signs, the term exterior features refers to the style, material, size and location of all signs.
- 44. Fabricated Metal.** any kind of building component manufactured of metal, often decorative in nature and frequently used as columns and railings.
- 45. Fixed light.** a window or an area of a window which does not open; glazed directly in a fixed frame that does not open.
- 46. Flashing.** metal strips used to make a water-tight transition between roofing material.
- 47. Fretwork.** ornamental wood which is usually carved or turned and installed over doorways and other openings.
- 48. Front Facing Gable.** the end wall of a building with a gable roof that faces the street.
- 49. Gable end.** an end wall having a gable (vertical triangular portion of the end of a building having a double sloping roof) from the level of the cornice or eaves to the ridge of the roof.

50. **Gable roof.** a roof which slopes on two sides from a ridge.
51. **Garden Loop Fence.** a woven wire fencing which is distinguished by the loop at the top and mid height .
52. **Grade.** the height of the surface of the ground in relationship to a structure (building).
53. **Hanging Sign.** Any sign suspended from an awning, canopy, bracket, or brace.
54. **Hip roof.** a roof which slopes upward from all four sides of a building.
55. **Hood mold.** a projecting molding over a door or a window.
56. **Infill.** the development of property or the construction of buildings on land that is near existing buildings.
57. **Internal Illumination.** A sign designed to be lit from the inside, including cabinet signs and channel letters, but generally excluding neon.
58. **Joint.** the material between brick or stone.
59. **Keystone.** in masonry, the center piece of an arch, often of contrasting material.
60. **Lath and Plaster.** a metal mesh or wood strips with plaster, a paste-like material, applied to surfaces such as walls or ceilings.
61. **Light.** a single pane of glass in a window or door.
62. **Lintels.** a structural member installed in a wall to create an opening for a door or window.
63. **Load Bearing Wall.** a wall capable of supporting an imposed load in addition to its own weight. These walls frequently run the full height of a building from foundation to roof.
64. **Local historic district or district.** a geographically and locally defined area established under Section 42. 101 which possess a significant concentration, linkage, or continuity of buildings, objects, sites, or structures united by past events or periods or styles of architecture, and which, by reason of such factors, constitutes a distinct section of the city. All sites, buildings and structures within a district, whether contributing properties or not , are subject to the regulations of the district.
65. **Local historic landmark or landmark.** any site, including a Heritage tree, building, or structure of historic or aesthetic significance to the city, the state or the nation, designated as a landmark under Section 42. 103.
66. **Marker.** a plaque located on or near a historic site, building, structure, or object; usually put in place by a government agency or a private organization.
67. **Mortar.** a paste-like mixture installed between masonry units such as brick or stone. It is usually made of cement, lime, water and sand.
68. **Muntin.** the small framing members within a single window sash that hold the individual pieces of glass in place.
69. **Non-contributing property.** a property which is less than fifty years old and/or does not fall into the conditions of a contributing property.
70. **Oculus.** a round or oval panel or aperture. The aperture may be glazed, open, or louvered.
71. **One-over-one configuration.** a window with a single sheet of glass in the top sash and a single sheet in the bottom sash.
72. **Out Building.** a building detached from the main house or structure but located on the same lot.
73. **Parapet.** an exterior wall which projects above the roof structure.
74. **Parkways.** the space between the curb and sidewalk, usually green space.
75. **Pedestrian Sign.** A sign oriented to pedestrian or street-level visibility.
76. **Pediment.** a triangular roof form of a building or as an ornament or hood mold over a door or window.
77. **Pier and Beam.** a foundation system consisting of rows of posts spaced at appropriate intervals and supporting beams which form a base for the house built on it.

- 78. Pilaster.** a projection from the wall construction, like a half column, often decorated or accentuated with a half capital.
- 79. Pinnacle.** a turret, or part of a building elevated above the main building.
- 80. Pitch.** the slope of a roof that has a slope and is not flat or horizontal.
- 81. Pitched roof.** a roof that has a slope and is not flat or horizontal.
- 82. Plaque.** a decorative or commemorative flat plate attached to a wall or surface.
- 83. Plinth Block.** a small, slightly projecting block at the bottom of the door trim, extending to the finished floor.
- 84. Porch.** a structure attached to a building to shelter an entrance or to serve as a semienclosed space; usually roofed and generally open-sided; it may be screened or glassenclosed. It may also be called a veranda.
- 85. Preservation.** the act of applying measures to sustain the existing form, integrity, and material of a building or structure, and the existing form and vegetative cover of a site.
- 86. Pressed metal.** metal that has been pressed into a decorative shape or pattern.
- 87. Pressed metal shingle roofing.** a roofing unit or shingle which is pressed from sheet metal and frequently has a decorative pattern.
- 88. Primary Sign.** The main sign identifying a business. Each downtown business may have one primary sign.
- 89. Profile.** the outline of a building or an element of that building that is usually shown as a cross section.
- 90. Projecting Sign.** Any sign attached to and placed perpendicular or at an angle to a building facade.
- 91. Rabbet.** a groove cut into one piece of wood to receive the projection or tongue of another.
- 92. Reconstruction.** the act of reproducing by new construction the exact form and detail of a vanished building, structure, or object, or a part thereof, as it appeared at a specific period of time.
- 93. Rehabilitation.** the process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions of features of the property which are significant to its historical, architectural and cultural values.
- 94. Repointing.** the removal of mortar from between the joints of masonry units and the replacing of it with new mortar. Mortar should match the original in composition.
- 95. Restoration.** the process of accurately recovering the form and details of a property and its setting as it appeared at a particular period of time by means of the removal of later work or by the replacement of missing earlier work.
- 96. Ridge.** the highest point of a pitched roof.
- 97. Rubble.** rough irregular stone which may vary in size, used in wall construction.
- 98. Sash.** the part of a window that moves or opens.
- 99. Secondary Sign.** A smaller sign than the primary, which may contain business details or may be oriented to pedestrians
- 100. Shiplap.** horizontal wood sheathing which butts together. When used on the interior walls it was frequently covered with cheesecloth and wallpaper.
- 101. Side Light.** a narrow window adjacent to a door or wider window, and the height the door or window, most often one of a pair flanking an entrance door.
- 102. Siding.** the finish covering of an exterior frame wall.
- 103. Sign/signage.** a permanent or fixed graphic or display that provides information. It may be freestanding or integrated into the building.
- 104. Sign Frieze.** A horizontal band across the building facade, usually above the transom and below the second story windows.
- 105. Heritage Tree.** Trees which measure twenty-four or more caliper inches in diameter at breast height (DBH),

which is considered to be four and one-half feet above natural grade, or those which are identified with historic personages or important events in local, state or national history.

106. Sills. the bottom portion of a window which often contrasts with the material of the wall.

107. Skirt. an element used to cover a foundation or the space between the main house and ground level.

108. Slope. the amount of degree of incline.

109. Soffit. the exposed, often flat, underside of a roof overhang.

110. Square wooden baluster. a short, wooden vertical member, rectangular in shape, used to support a stair handrail or a coping.

111. Square wooden post. any wooden vertical member, rectangular in shape, used to support the structure.

112. Standing Seam Metal Roofing. a sheet metal roofing with vertical folded seams running parallel along the slope.

113. Stile and Rail Door. components of a door; the stiles are the upright structural members and the rails are the horizontal framing members at top, middle and bottom of the door.

114. Sympathetic redesign. new work that has an appropriate relationship to the existing historic architecture and character of the surrounding area, based on rhythm, proportion, and scale.

115. Tapered box column. a hollow, built-up column, constructed of wood, which is frequently seen in wood flooring and paneling.

116. Temporary Sign. a sign or banner generally designed for temporary or seasonal use mounted on building facades in the District. Temporary signs are limited to a 90 day display period per year.

117. Tongue and Groove. a joint composed of a rib (tongue) received by a groove, frequently seen in wood flooring and paneling.

118. Tower. a portion of a building characterized by its relatively great height in relation to the rest of the structure.

119. Transom window. a window separated by a horizontal member of a door frame or window.

120. Turn buckle. a device for connecting and tightening a rod as for a canopy support.

121. Turned wood baluster. a decorative picket used to support a handrail.

122. Turned wood post. a wooden support with a decorative profile that has been turned on a lathe.

123. Turned Wood Railing. a railing whose architectural components are turned on a lathe to create a spindle.

124. Turret. a diminutive tower, characteristically corbelled from a corner.

125. Two part commercial block. a typical 2-4 story building with commercial activity on the ground floor and more private uses on the upper floor, i.e. offices or residential.

126. V -Crimp Roofing. sheet metal roofing which is folded to create a "v" in profile and laps at a "V" joint.

127. Vernacular. a building whose form reflects the local influences and materials.

128. Wainscot. a decorative paneling applied to the lower portion of an interior wall.

129. Water table. a horizontal exterior ledge on a wall, pier, buttress, etc.; often sloped and provided with a drip molding to prevent water from running down the face of the lower portion; also called a canting strip.

130. Welded Wire Fencing. a welded wire fencing comprised of square or rectangular openings also known locally as "hog wire" or "goat wire". An acceptable alternative for chain link fencing in historic neighborhoods.

131. Window Sign. Any sign applied to or located within 12 inches of an exterior window.

132. Wood sash window. a window where the frame work is constructed of wood. It may be movable or fixed.

APPENDIX D. PLANTING GUIDELINES

ARTICLE 1: PLANTING GUIDELINESE:2

 DIVISION 1: GENERAL REQUIREMENTS E:2

 DIVISION 2: RECOMMENDED PRACTICES E:3

ARTICLE 2: PREFERRED PLANT LIST E:7

 DIVISION 1: LANDSCAPING / MITIGATION TREES E:8

 DIVISION 2: LANDSCAPING PLANTS E:13

 DIVISION 3: GROUNDCOVERS, GRASSES, AND TURF E:16

ARTICLE 3: NOXIOUS AND INVASIVE SPECIESE:17

ARTICLE 4: DEFINITIONS..... E:18

ARTICLE 1: PLANTING GUIDELINES

DIVISION 1: GENERAL REQUIREMENTS

- A. Purpose.** The purpose of these general requirements is to provide information about trees and other landscape items which are suitable for the City of San Marcos.
- B. Tree Size.** Tree species range in size and are typically classified into 3 categories: small, medium, and large:
1. Small / Understory / Ornamental Trees range to 20 feet in height. They can also be referred to as “Understory Trees”.
 2. Medium / Shade Trees range from 20 to 40 feet in height. They can also be referred to as “Shade Trees”.
 3. Large / Shade trees are 40 feet and greater in height. They can also be referred to as “Shade Trees”.



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C. Trees Near Utility Lines

1. Only small trees (Understory Trees) should be planted under City overhead utility lines. The Landscaping / Mitigation Tree list, in Division 2 on the following pages, designates several small trees which may be utilized.

D. Xeriscape / Non-Plant Groundcover Materials

1. The use of non-plant groundcover materials such as crushed granite, limestone, and rocks may be incorporated into landscape plans with the following standards:

- a. Non-plant groundcover material adjacent to or within public right-of-way, sidewalks, and pedestrian pathways must be a minimum of 2 inches in size.
- b. Decomposed and crushed granite, road base, pine mulch, pine bark, pecan shells, wood chips, and any other material that has fines in it or is easily displaced during rain events are not allowed adjacent to or within public right-of-way, sidewalks, and pedestrian pathways.
- c. If hardwood mulch, decomposed granite, or other material with fines in it are proposed as part of a landscape plan, the material must be contained within the landscape bed through the use of metal or mortared edging or raised curbs. The metal or mortared edging and curbs must be raised a minimum of 3 inches above the material.
- d. Medium colored stone, such as beige or light grey is preferred over white stone, which causes glare, or black, which absorbs heat.

E. Resources. The following resources will provide additional information on tree species and planting criteria:

Texas A&M Forest Service
Texas Tree Planting Guide
<http://texastreeplanting.tamu.edu/>

University of Florida
Tree Selection Specifications
<http://hort.ifas.ufl.edu/woody/>

James Urban, FASLA
Soil Testing Tools and Soil Volumes for Trees
<http://www.jamesurban.net/>

Texas Oak Wilt
Pruning Prevention Guidelines
<http://texasoakwilt.org/>

City of Palo Alto
Tree Technical Manual
<http://www.cityofpaloalto.org/civicax/filebank/documents/6436>

DIVISION 2: RECOMMENDED PRACTICES

Section D.1.2.1 Introduction

- A. Purpose.** The Recommended Practices identified throughout this Division are not mandatory, but provide additional proactive measures for the care of trees, such as fertilizing, reducing a tree hazard, protection from specific disturbances or procedures for planting trees on problem sites.
- B. Conditions of Approval.** A recommended practice may be required if it is so specified within the 'conditions of approval' for a development project or mitigation for injury or disturbance.
- C. Discretion.** In all cases, the Director of Planning or Urban Forester shall, if justified by changing field conditions such as conflict with utilities, have discretion to modify, redesignate or add to any condition, practice or standard mentioned within the Manual.

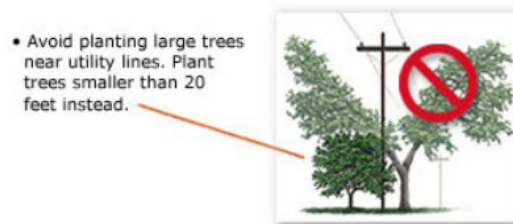
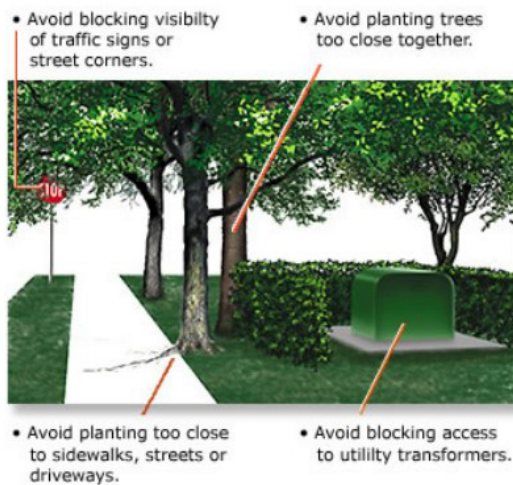
Section D.1.2.2 Assumptions and Limiting Conditions

- A.** No responsibility is assumed by the City of San Marcos for matters legal in character regarding this Division. Any legal description that may be provided is assumed to be correct. Care has been taken to obtain reasonable information from reliable sources for this Division. Visual aids within this Division, such as sketches, diagrams, graphs, photos, are not necessarily to scale and should not be construed as engineered data for construction. This Division has been crafted to conform with current standards of care, best management practices, evaluation and appraisal procedures, diagnostic and reporting techniques and sound arboricultural practices as recommended by the sources listed in the Resources section.

Section D.1.2.3 Recommended Location Standards

- A. General.** The below exhibit demonstrates general recommended planting location standards.

Avoiding Problems With Your Tree



Also Avoid:

- Encroaching on a neighbor
- Blocking views
- Shading garden

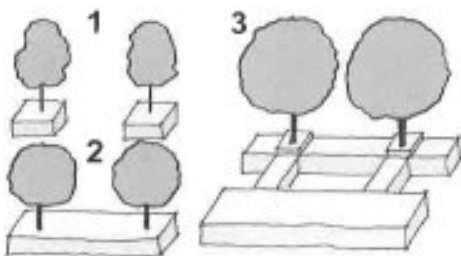
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B. Recommended Parking Area Landscaping Standards

1. Soil depth should be in good condition and a minimum of three feet or greater at the end of construction.
2. Plant large trees in areas of large soil resources.
3. Cluster trees in areas of contiguous soil volume.
4. Design symmetrical soil areas if uniform trees are desired. Avoid designing formal rows or grid of trees where some Shade trees are in large beds and some are in restricted spaces.
5. Keep turf 3 to 5 feet from the trunks of newly planted trees until the tree is established.
6. Prevent soil compaction by design; plant trees in landscape beds, of bermed soil or use of landscaping plants to prevent foot traffic.

C. Increasing Effective Soil Volumes in Urban Areas

1. Separate soil volumes limit tree growth potential.
2. Connected soil volumes allow for shared root space
3. Connections under pavements and to adjacent Soil volumes provide the greatest rooting potential.



Good Example: Large soil volume, shade trees are clustered, soil is higher where the trees are placed to prevent people walking through and compacting the soil. The trees have more soil volume and are not competing with turf or getting damaged by mechanical equipment.



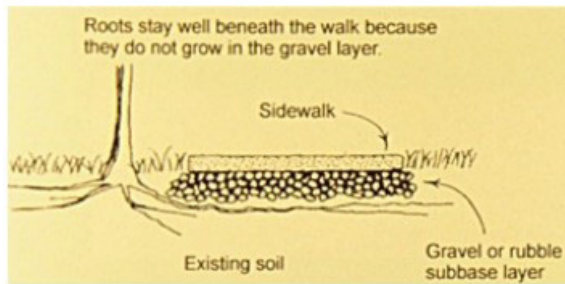
Poor Example: Shade tree is planted in a narrow strip smaller than a parking space. The small area is likely very compacted and has a thin layer of soil over fill material.



Good Example: Example of 6X6 raised bed planter provides space for root flare growth, electrical, seating, and allows trees to reach moderate size.

Section D.1.2.4 Recommended Standards for Cutouts in Sidewalks

- A. General.** Cutouts in Sidewalks should be appropriately sized to reduce conflict with hardscape and tree growth. Tree trunks do not grow necessarily in a concentric manner evenly on all sides. The trees root flare grows wider and the tree grows in diameter.
- B. Sub-Base Material Recommendations.** Sub-base material under sidewalks should be 6 inches of washed gravel. This should prolong the life of sidewalks. Other Sub-base materials such as sand, limestone, or none tend to allow roots to grow directly under the slab in the sub-base material.



C. Alternative materials are recommended to use within cutouts to tree grates:

1. Modular paver blocks, low 6 inch tall fence, low wall or curb, thin layer of mulch not touching the trunk, landscape plants, washed gravel without fines, or washed rock may be used; no extra fill soil shall be placed on top of the root ball or cover the root flare.
2. Paver blocks and tree grates must be adjusted on a regular basis or they can kill the tree if they are not maintained.



Good Example



Good Example



Good Example

Section D.1.2.5 Mulch Recommendations

- A. Organic mulches.** Include wood chips, pine needles, shredded bark, nut shells, compost mixes and leaves. Organic mulches decompose at different rates, depending on the material, and periodically must be replenished.
- B. Compost.** Composted wood chips make good mulch, especially when the leaves, bark and wood are included in the composition. Fresh wood chips also may be used around established trees and shrubs. Avoid using uncomposted wood chips that have been piled without exposure to oxygen. Sawdust, grass clippings and straw are not recommended.
- C. Inorganic Mulches.** Include decorative stone, lava rock, pulverized tires and geotextile fabrics. Inorganic mulches are useful in xeriscaping and for soil protection in high traffic areas, but are not recommended for mulching around trees. Heat reflected from inorganic mulches may be high enough to kill thin-barked trees.

Section D.1.2.6 Irrigation Recommendations

- A.** Established trees can be damaged from the installation of irrigation in the landscape either by trenching or poor design.
- B.** The following irrigation methods are recommended for newly planted trees:
 1. Trees less than 1.5" in diameter or smaller shall be provided with a minimum of one bubbler.
 2. Trees 1.5" to 2.5" in diameter at shall be provided with a minimum of two bubblers.

3. Trees 2.5" in diameter to up to 4" in diameter shall be provided with a minimum of three bubblers.
4. Trees 4 to 6 inches in diameter shall require four bubblers.
5. It is recommended for trees greater than 6 inches or larger to use drip rings for irrigation and tree establishment.



Good Example: Drip irrigation is great for established trees; it is low in water waste and applies it directly to the root system.



Poor Example: Drip irrigation wrapped around the tree trunk of an established tree. Water applied on the tree trunk and root flare can introduce disease and decay; restrict tree diameter growth and possibly lead to tree mortality.

ARTICLE 2: PREFERRED PLANT LIST

- A. Purpose.** The purpose of the Preferred Plant List is to identify species of understory and shade trees, shrubs, vines, perennials, groundcovers, grasses, and turf that are native or non-invasive adapted horticultural species and therefore suitable for the City of San Marcos.

DIVISION 1: LANDSCAPING / MITIGATION TREES

SMALL / UNDERSTORY / ORNAMENTAL TREES

SPECIES	SCIENTIFIC NAME	GROWTH	WATER	SOIL	LIGHT	PLANTING AREA	VULNERABLE
American Smoketree	Crotonus obovatus	slow		shallow, alkaline		container, parking islands, narrow median strips	minor
Anachaco Orchid Tree	Bauhinia lunarioides	fast		alkaline soils		south side of buildings	minor
Blackbrush acacia	Acacia rigidula	slow		well drained, alkaline		container, planting strips or parking lot islands	minor
Bluewood Condalia	Condalia hookeri	slow		well drained, alkaline		container, planting strips or parking lot islands	minor
Carolina Buckthorn	Frangula caroliniana	moderate		well drained, alkaline		N/A	medium
Cherry-Laurel	Prunus caroliniana	moderate		well drained, alkaline, acidic		medium planting strips	medium
Chihuahuan orchid tree	Bauhinia lunarioides	moderate				N/A	minor
Chilean mesquite	Prosopis chilensis	fast				N/A	minor
Chinese Fringe Tree (male)	Chionanthus retusus	moderate				N/A	medium
Crapemyrtle, Acoma	Lagerstroemia, indica "Acoma"	moderate		alkaline, well drained		container, parking islands, narrow median strips	minor
Crapemyrtle, Cherokee'	Lagerstroemia, indica "Cherokee"	moderate		well drained, alkaline, acidic		container, parking islands, narrow median strips	medium
Crapemyrtle, Hopi	Lagerstroemia, indica "Hopi"	moderate				N/A	minor
Crapemyrtle, Kiowa	Lagerstroemia, indica "Kiowa"	moderate				N/A	minor
Crapemyrtle, Natchez	Lagerstroemia, indica "Natchez"	moderate		well drained, alkaline, acidic		medium to large parking islands, median strips	minor
Crapemyrtle, Zuni	Lagerstroemia, indica "Zuni"	moderate		well drained, alkaline, acidic		N/A	minor
Desert Willow	Chilopsis linearis	fast		alkaline soils		containers, planting strips	minor
Eastern Persimmon	Diospyros virginiana	moderate		moist, well draining		N/A	medium
Eve's Necklace	Styphnolobium affine	moderate		moist, well draining		N/A	minor
Evergreen Sumac	Rhus virens	moderate		well drained, alkaline		N/A	minor
Flame Leaf Sumac	Rhus lanceolata	moderate		well drained, alkaline, acidic		container, planting strips or parking lot islands	minor
Fragrant Ash	Fraxinus cuspidata	moderate		deep, moist, well draining		N/A	medium
Fragrant Tea Olive	Osmanthus x fortunei	slow		well drained, acidic		median strip planting, parking lot planting	minor
Golden leadball tree	Leucaena retusa	moderate		well drained, alkaline		N/A	minor

SMALL / UNDERSTORY / ORNAMENTAL TREES

SPECIES	SCIENTIFIC NAME	GROWTH	WATER	SOIL	LIGHT	PLANTING AREA	VULNERABLE
Guajillo	Acacia berlandieri	slow		well drained, alkaline	 N/A		minor
Jerusalem Thorn "retama"	Parkinsonia aculeata	fast		well drained, alkaline	 N/A		minor
Mexican Buckeye	Ungnadia speciosa	moderate		shallow, alkaline	 median strip planting, parking lot planting		minor
Mexican Plum	Prunus mexicana	moderate		deep, moist, well draining	 median strip planting, parking lot planting		minor
Redbud, Mexican or Texas	Cercis canadensis var. mexicana or texana	Slow		shallow, alkaline	 median strip planting, parking lot planting		medium
Palo Verde, Texas	Parkinsonia texana	fast		well drained, alkaline	 parking lot islands, median planting strips		minor
Palm, Windmill	Trachycarpus fortunei	slow		deep, moist, well draining	 N/A		minor
Peach, Flowering	Prunus persica	moderate		deep, moist, well draining	 N/A		medium
Pomegrante	Punica granatum	moderate		well drained, deep soil	 N/A		minor
Possumhaw	Ilex decidua	slow		moist, well draining	 medium planting strips		minor
Red Buckeye	Aesculus pavia	slow		variety of soils	 N/A		minor
Roughleaf Dogwood	Cornus drummondii	fast		moist, well draining	 N/A		minor
Rusty Blackhaw	Viburnum rufidulum	slow		well drained, deep soil	 container, medium to large planting strips		medium
Silktassel, Mexican	Garrya ovata spp. Lindheimeri	moderate		shallow, alkaline, well drained	 container, planting strips or parking lot islands		minor
Sweet Acacia	Acacia farnesiana	slow		well drained, alkaline, acidic	 container, planting strips or parking lot islands		minor
Tenaza	Havardia pallens	slow		well drained, alkaline	 N/A		minor
Texas Ebony	Ebenopsis ebano	slow		well drained, alkaline	 N/A		minor
Texas kidneywood	Eysenhardtia texana	moderate		well drained, alkaline	 N/A		minor
Texas Mountain Laurel	Sophora secundiflora	slow		shallow, alkaline	 container, large to medium parking islands and strips		minor
Texas Persimmon	Diospyros texana	slow		deep, moist, well draining	 N/A		minor
Texas Pistache	Pistache texana	moderate		well drained, alkaline	 N/A		minor
Twisted acacia	Acacia shaffneri	slow		well drained, alkaline	 N/A		minor
Waxmyrtle	Morella cerifera	fast		well drained, alkaline, acidic	 container, medium to large planting islands or strips		medium
Yaupon Holly	Ilex vomitoria	moderate		well drained, alkaline, acidic	 container, large to medium parking islands and strips		minor

SMALL / UNDERSTORY / ORNAMENTAL TREES

SPECIES	SCIENTIFIC NAME	GROWTH	WATER	SOIL	LIGHT	PLANTING AREA	VULNERABLE
Wafer Ash, Hop Tree	<i>Ptelea trifoliata</i>	moderate		shallow, alkaline, well drained	 N/A		medium

MEDIUM / SHADE TREES

SPECIES	SCIENTIFIC NAME	GROWTH	WATER	SOIL	LIGHT	PLANTING AREA	VULNERABLE
Afgan Pine	<i>Pinus eldarica</i>	moderate		shallow, alkaline, well drained	 N/A		medium
Anacua	<i>Ehretia anacua</i>	moderate		well drained, variety of soils		large parking islands, median or highway strips	minor
Arroyo Sweetwood	<i>Myrospermum sousanum</i>	fast		well drained, variety of soils		parking islands, sidewalks	minor
Bigtooth Maple	<i>Acer granditatum</i>	moderate		well drained, alkaline		large parking lot islands, or lawns	minor
Blue Point Juniper	<i>Juniperus chinensis</i> 'Blue Point'	moderate		shallow, alkaline, well drained	 N/A		minor
Chalk Maple	<i>Acer leucoderme</i>	slow		well drained, alkaline, acidic		large parking lot islands, median strips	minor
Deodar Cedar	<i>Cedrus deodara</i>	fast		well drained, alkaline, acidic		planting strips	minor
Eastern Red Cedar	<i>Juniperus virginiana</i>	fast		moist, well draining		median strip planting, parking lot planting	minor
Elm, 'Drake' Chinese	<i>Ulmus parvifolia</i> "Drake"	moderate		well drained, alkaline		medium sized parking islands, medium strip planting	medium
Goldenrain tree	<i>Koeleruteria paniculata</i>	moderate		well drained, alkaline, acidic		parking islands, sidewalks, along highway	medium
Italian Cypress	<i>Cupressus sempervirens</i>	moderate		well drained, alkaline, acidic		narrow planting spaces, can be planted near buildings	medium
Leyland Cypress	<i>Cupressus</i> × <i>leylandii</i> ,	fast		well drained, alkaline, acidic		medium to large planting spaces, planting strips	minor
Little Gem' Southern Magnolia	<i>Magnolia grandiflora</i> "little gem"	slow		well drained alkaline, acidic		container, parking lot islands, median planting strips	medium
Loquat	<i>Eriobotrya japonica</i>	moderate		well drained, alkaline, acidic		parking lot islands, median planting strips	medium
McFetter Alligator Juniper	<i>Juniperus deppeana</i> "McFetter"	fast		well drained, alkaline, acidic		planting strips in parking lots or highways	minor
Oak, Cambyi	<i>Quercus cambyi</i>	moderate		well drained, alkaline	 N/A		minor
Oak, Chinkapin	<i>Quercus muehlenbergii</i>	moderate		shallow, alkaline		large parking islands, planting strips	minor
Oak, Lacey	<i>Quercus laceyii</i>	Slow		shallow, alkaline		medium parking islands, planting strips	medium
Oak, Loquat	<i>Quercus rysophylla</i>	moderate		deep, moist, well draining	 N/A		minor

MEDIUM / SHADE TREES

SPECIES	SCIENTIFIC NAME	GROWTH	WATER	SOIL	LIGHT	PLANTING AREA	VULNERABLE
Oak, Shumard	Quercus shumardi	fast		well drained, alkaline, acidic		large parking islands, median or highway strips	minor
Oak, Texas Red	Quercus texana	moderate		alkaline soils		large parking islands, medium planting strips	medium
Oak, Vasey or Shin, Scrub	Quercus pungens var vasyana	moderate		well drained, alkaline		N/A	minor
Oak, Mexican white oak	Quercus polymorpha	moderate		variety of soils		N/A	minor
Saucer Magnolia	Magnolia soulangeana	moderate		acidic, well drained		medium to large planting spaces	minor
Shoestring acacia	Acacia stenophylla	moderate				N/A	minor
Southern Sugar Maple	Acer barbatum	fast		deep, moist, alkaline soil		medium sized parking islands, medium strip planting	medium
Texas Ash	Faxinus albicans	fast		deep, moist, well draining		large to medium parking islands, planting strips	minor
Texas Sabal Palm	Sabal texana	slow		poorly drained, alkaline		planting strips, medium to large parking islands	minor
Thornless Honeylocust	Gleditsia triacanthos form imeris	fast		well drained, alkaline		large parking islands, planting strips	sensitive
Western Soapberry	Sapindus drummondii	moderate		deep, moist, well draining		medium parking islands, planting strips	minor
Wild Olive (Texas or Mexican Olive)	Cordia boissieri	fast		well drained, alkaline		N/A	sensitive
Wright Acacia	Acacia wrightii	slow		well drained, alkaline		large to medium parking islands, planting strips	minor

LARGE / SHADE TREES

SPECIES	SCIENTIFIC NAME	GROWTH	WATER	SOIL	LIGHT	PLANTING AREA	VULNERABLE
Arizona Cypress	Cupressus arizonica var. arizonica	moderate		alkaline, well draining		medium parking islands, median or highway strips	minor
Cottonwood*	Populus deltoides	fast		deep, moist, well draining		N/A	N/A
Elm, American "Princeton"	Ulmus americana var "Princeton"	fast		deep alkaline soil		large planting spaces or parks	medium
Elm, Cedar	Ulmus crassifolia	moderate		poorly drained, alkaline		large parking lot islands, medium islands	medium
Honey mesquite	Prosopis glandulosa	moderate		well drained, alkaline, variety of soils		N/A	minor
Huisache	Acacia farnesiana	fast		well drained, alkaline, variety of soils		N/A	minor
Italian Stone Pine	Pinus pinea	moderate		well drained, alkaline, acidic		large to medium parking islands, planting strips	minor
Mexican Sycamore	Platanus mexicana	fast		moist, well draining		large parking islands, planting strips, highway strips	medium
Montezuma Cypress	Taxodium mucronatum	fast		poorly drained		medium to large planting strips	minor
Oak, Bur	Quercus macrocarpa	moderate		deep, moist, well draining		large spaces, large parking islands	minor
Oak, Texas Live	Quercus fusiformis	moderate		well drained, shallow, alkaline		N/A	N/A
Oak, Southern Live	Quercus virginiana	medium		well drained, alkaline, acidic		large parking islands, median or highway strips	medium
Pecan	Carya illinoensis	moderate		deep, moist, well draining		N/A	N/A
Sycamore, Texas	Platanus occidentalis var. glabrata	fast		deep, moist, well draining		N/A	N/A
Walnut, Arizona or Black	Juglans major or nigra	moderate		deep, moist, well draining		N/A	N/A

DIVISION 2: LANDSCAPING PLANTS

SHRUBS

SPECIES	SCIENTIFIC NAME	LIGHT
Abelia, Glossy	Abelia grandiflora	
Agarita	Berberis (Mahonia) trifololata	
American beautyberry	Callicarpa americana	
Apache Plume	Fallogia paradoxa	
Barbados Cherry	Malpighia glabra	
Bicolor iris	Dietes bicolor	
Bottlebrush	Callistemon citrinus	
Butterfly Bush, Wooly	Buddleja marrubifolia	
Cast Iron Plant	Aspidistra elatior	
Dalea, Black	Dalea frutescens	
Desert Broom	Baccharis sarothroides	
Dwarf palmetto	Sabal minor	
Dwarf wax myrtle	Myrica pusilla	
Elaeagnus	Elaeagnus pungens	
Elbow Bush	Forestiera pubescens	
Esperanza (Yellow Bells)	Tecoma stans var angusta	
Flame Acanthus	Anisacanthus quadrifidus var. wrightii	
Fragrant Mimosa	Mimosa borealis	
Germander, Bush or Silver	Teucrium fruticans	
Hog plum	Colubrina texensis	
Holly, Chinese, Buford	Ilex cornuta	
Holly, Yaupon	Ilex vomitoria	
Juniper, Parsons/Seagreen	Juniperus chinensis cultivars	
Mallow, Globe	Sphaeralcea ambigua	
Mexican Bird of Paradise	Caesalpinia mexicana	
Mistflower, White	Ageratina havanensis	
Red Buckeye	Aesculus pavia	
Rosemary	Rosmarinus spp.	
Sage, Texas (Cenizo)	Leucophyllum frutescens	
Senna, Flowering	Cassia corymbosa	
Shore Juniper	Juniperus conferta	

SHRUBS

SPECIES	SCIENTIFIC NAME	LIGHT
Skyflower duranta	Duranta repens	
Sumac, Evergreen	Rhus virens	
Sumac, Flameleaf	Rhus lanceolata	
Sumac, Fragrant (Aromatic)	Rhus aromatica	
Thryallis	Galphimia glauca	
Turk's Cap	Malvaviscus arboreus	
Viburnum, Rusty Blackhaw	Viburnum rufidulum	
Wax Myrtle	Myrica cerifera	
White brush	Aloysia gratissima	
White Mistflower/Boneset	Ageratina havanensis	

VINES

SPECIES	SCIENTIFIC NAME	LIGHT
Carolina Jessamine	Gelsemium sempervirens	
Coral honeysuckle	Lonicera sempervirens	
Crossvine	Bignonia capreolata	
Cypress Vine	Ipomoea quamoclit	
Fig vine	Ficus pumila	
Jasmine, Confederate (Star)	Trachelospermum jasminoides	
Lady Banksia Rose	Rosa banksiae	
Leather Flower Vine	Clematis spp.	
Mexican Flame Vine	Pseudogynoxys chenopodioides	
Mustang Grape	Vitis mustangensis	
Passion Vine	Passiflora incarnata	
Texas Wisteria	Wisteria macrostachya	
Trumpet Vine	Campsis radicans	
Virginia Creeper	Parthenocissus quinquefolia	

PERENNIALS

SPECIES	SCIENTIFIC NAME	LIGHT
Artemisia	Artemisia spp.	
Aster, Fall or Texas	Aster spp.	
Bird of Paradise, Texas	Caesalpinia gilliesi, pulcherrima	
Black Dalea	Dalea frutescens	
Black-Eyed Susan	Rudbeckia hirta	
Bulbine	Bulbine frutescens	
Butterfly Weed, Mexican	Asclepias currasavica	
Calylophus (Square Bud Primrose)	Calylophus berlandieri	
Cast Iron Plant	Aspidistra elatior	
Chile Pequin (Petin)	Capiscum anuum	
Columbine, Hinckely	quilegia chrysantha var. hinckleyana	
Coneflower, Purple (Echinacea)	Echinacea purpurea	
Coralbean	Erithryna herbacea	
Coralberry	Symphoricarpos orbiculus	
Coreopsis, Lance-leaf	Coreopsis lanceolata	
Cuphea, Batface	Cuphea llavea	
Cuphea, 'David Verity'	Cuphea 'david verity'	
Daisy, Blackfoot	Melampodium leucanthum	
Daisy, Chocolate	Berlandiera lyrata	
Daisy, Copper Canyon	Tagetes lemmonii	
Damianita	Chrysactinia Mexicana	
Datura or Jimson Weed	Datura wrightii	
Esperanza (Yellow Bells)	Tecoma stans var angusta	
Esperanza/Yellow Bells	Tecoma stans	
Firebush	Hamelia patens	
Firecracker Fern	Russelia equisetiformis	
Gaura	Gaura lindheimeri	
Butterfly Gaura	Gaura lindheimeri	
Gayfeather	Liatris mucronata	
Heartleaf Hibiscus	Hibiscus cardiophyllus	
Honeysuckle, Mexican	Justicia spicigera	

PERENNIALS

SPECIES	SCIENTIFIC NAME	LIGHT
Hymenoxys, Four Nerve Daisy	Tetranneuris scaposa or Hymenoxys scaposa	
Iris, Bicolor	Diets bicolor	
Lamb's Ear	Stachys byzantina	
Lantana	Lantana spp.	
Lion's Tail	Leonotis leonurus	
Marigold, Mexican Mint	Tagetes lucida	
"Maximillian Sunflower"	Helianthus maximiliana	
"Mealy Blue Sage"	Salvia farinacea	
"Mexican BushSage"	Salvia leucantha	
"Mexican Marigold Mint"	Tagetes lucida	
"Mexican Oregano"	Poliomintha longiflora	
Mistflower, Gregg	Conoclinium greggi	
Morning Glory, Bush	Ipomoea leptophylla	
Oregano, Mexican	Poliomintha longiflora	
Oregano, Mexican	Origanum vulgare	
Penstemon	Penstemon spp.	
Pigeonberry	Rivina humilis	
"Pink Skullcap"	Scutellaria suffrutescens	
"Plumbago"	Plumbago auriculata	
Pride of Barbados	Caesalpinia pulcherrima	
Primrose, Missouri	Oenothera missouriensis	
Primrose, Pink Evening	Oenothera speciosa	
"Purple Coneflower"	Echinacea purpurea	
Purple Prairie Clover	Dalea purpurea	
Rock Rose	Pavonia lasiopetala	
Ruellia, Dwarf	Ruellia brittoniana	
Sage, Cedar	Salvia roemeriana	
Sage, Jerusalem	Phlomis fruticosa	
Sage, Russian	Perovskia atriplicifolia	
Sage, Salvia	Salvia spp.	
Santolina	Santonlina chamaecyparissus	
"Scarlet Sage"	Salvia coccinea	

PERENNIALS

SPECIES	SCIENTIFIC NAME	LIGHT
Senna, Lindheimer	<i>Senna lindheimeriana</i>	
Shrimp Plant	<i>Justica brandegeana</i>	
Skeletonleaf Goldeneye	<i>Viguiera stenoloba</i>	
Skullcap, Heartleaf	<i>Scutellaria ovata</i> sp. bracteata	
Skullcap, Pink or Wright's Purple	<i>Scutellaria suffrutescens</i> or wrightii	
Spiderwort	<i>Tradescantia</i> spp.	
Sunflower, Maximilian	<i>Helianthus maximiliani</i>	
Texas Betony	<i>Stachys coccinea</i>	
"White Mistflower"	<i>Eupatorium Wrightii</i>	
"Wild Petunia"	<i>Ruellia nudiflora</i>	
Winecup, Perennial	<i>Callirhoe involucrata</i>	
"Yarrow"	<i>Achillea millefolium</i>	
Zexmenia	<i>Wedelia texana</i>	

CACTI AND SUCCULENTS

SPECIES	SCIENTIFIC NAME	LIGHT
Agave	<i>Agave</i> spp.	
Basket Grasss, Texas Beargrass, Sacahuista	<i>Nolina texana</i>	
Bulbine	<i>Bulbine frutescens</i>	
Devil's shoestring, Nolina	<i>Nolina lindheimeriana</i>	
Prickly Pear	<i>Opuntia</i> spp.	
Sedum	<i>Sedum</i> spp.	
Sotol, Texas	<i>Dasyliion texana</i>	
Yucca (Twistleaf, Softleaf, Paleleaf)	<i>Hesperaloe</i> spp., <i>Yucca</i> spp.	

DIVISION 3: GROUNDCOVERS, GRASSES, AND TURF

GROUNDCOVERS

SPECIES	SCIENTIFIC NAME	LIGHT
Betony, Texas	Stachys coccinea	
Clover Fern	Marsilea macropoda	
Dalea, Gregg	Dalea greggii	
Frog Fruit	Phyla incisa	
Germander, Creeping	Teucrium cossonii	
Horseherb, Straggler Daisy	Calypocarpus vialis	
Iceplant	Aptenia spp., Delosperma spp., Malephora spp.	
Mountain Pea	Orbexilium sp. nov.	
Pigeonberry	Rivina humilis	
Plumbago, Leadwort	Ceratostigma plumbaginoides	
Prarie mix	mix of native grass and wildflowers	
Purple Heart	Setcreasea pallida	
Rosemary, Trailing	Rosmarinus officinalis var. prostratus	
Santolina	Santolina chamaecyparissus	
Sedges (Texas, Berkley, Cedar)	Carex spp.	
Sedum	Sedum spp.	
Silver Ponyfoot	Dichondra argentea	
Snakeherb	Dyschoriste linearis	
Verbena	Verbena spp.	
Wooly Stemodia	Stemodia lanata	
Zexmenia, Wedelia	Wedelia hispida	

GRASSES

SPECIES	SCIENTIFIC NAME	LIGHT
Bluestem, Little	Schizachyrium scoparium	Sun/part shade
Feathergrass, Mexican	Nassella tenuissima	
Green Spangletop	Leptochloa dubia	
Indian grass	Sorghastrum nutans	
Inland Sea Oats	Chasmanthium latifolium	
Maiden Grass or other Miscanthus	Miscanthus spp.	
Muhly Grass (Bamboo, Gulf, Deer, Big)	Muhlenbergia spp.	
Purple Threeawn	Aristida purpurea	
Sideoats Grama	Bouteloua curtipendula	
Switchgrass	Panicum virgatum	
Texas cupgrass	Eriochloa sericea	
Virginia wildrye	Elymus virginicus	

TURFS

SPECIES	SCIENTIFIC NAME	LIGHT
*Bermuda grass (sod only) - 'Celebration', 'Tifway 419'	Cynodon spp.	
Buffalo grass - '609', 'Density', 'Prairie', 'Prestige'	Bouteloua dactyloides	
Shortgrass Prairie Seed Mix	Buffalo, Curly Mesquite, Blue Grama	
Zoysia - 'JaMur', 'El Toro', 'Crowne', or 'Palisades'	Zoysia japonica	

* Common Bermuda is considered an invasive species.

ARTICLE 3: NOXIOUS AND INVASIVE SPECIES

- A. Purpose.** The purpose of the Noxious and Invasive Species List is to identify species that are noxious and invasive and therefore not suitable for the City of San Marcos.
- B. Problems.** Problems develop when certain non-native horticultural species escape and establish in native areas. The preservation and planting of species found on the City's noxious and invasive species list is problematic and therefore strongly discouraged.
- C. What is a Noxious and Invasive Plant?** Any plant species that has a serious potential to cause economical or ecological harm to the agriculture, horticulture, native plants, ecology and waterways of Texas.
- D. Background.** The City's list is based on the Texas Department of Agriculture Noxious Weed List and the Texas Parks and Wildlife Department Prohibited Aquatic Plants list, and also includes some species from the USDA Forest Service Nonnative Invasive Plants of Southern Forests Field Guide.
- E. Disclaimer.** State-required disclaimer: The City's list of noxious and invasive species is only a recommendation and has no legal effect in the state of Texas. It is lawful to sell, distribute, import, or possess a plant on this list unless the Texas Department of Agriculture labels the plant as noxious or invasive on the Department's plant list.
- F. Resources.** The following resources were utilized to create the City of San Marcos Noxious and Invasive Species List:

Texas Department of Agriculture
Noxious Weed List
<http://www.texasagriculture.gov>

Texas Parks and Wildlife
Prohibited Exotic Species List

USDA Forest Service
Nonnative Invasive Plants of Southern Forests
<http://www.invasive.org/eastern/srs/>

CITY OF SAN MARCOS NOXIOUS & INVASIVE SPECIES LIST

SCIENTIFIC NAME	COMMON NAME
<i>Ailanthus altissima</i>	Tree of heaven
<i>Alternanthera philoxeroides</i>	Alligatorweed
<i>Arundo donax</i>	Giant reed
<i>Bothriochloa ischaemum</i> var. <i>songarica</i>	King Ranch bluestem
<i>Broussonetia papyrifera</i>	Paper mulberry
<i>Centaurea melitensis</i>	Malta star-thistle
<i>Centaurea solstitialis</i>	Yellow Star-Thistle
<i>Colocasia esculenta</i>	Elephant ears
<i>Cynodon dactylon</i>	Bermudagrass
<i>Cyperus papyrus</i>	Papyrus
<i>Cyrtomium falcatum</i> or <i>C. beckettii</i>	Japanese netvein hollyfern
<i>Eichhornia azurea</i> or <i>E. crassipes</i>	Water hyacinth
<i>Firmiana simplex</i>	Chinese parasoltree
<i>Hedera helix</i>	English Ivy
<i>Hydrilla verticillata</i>	Hydrilla
<i>Hygrophila auriculata</i>	Hygrophila
<i>Iris Pseudacorus</i>	Yellow flag Iris
<i>Lantana montevidensis</i>	Purple trailing Lantana
<i>Ligustrum lucidum</i>	Glossy privet
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Macfadyena unguis-cati</i>	Catclawvine
<i>Melia azedarach</i>	Chinaberry tree
<i>Nandina domestica</i>	Heavenly bamboo
<i>Paulownia tomentosa</i>	Princesstree
<i>Photinia x fraseri</i>	Redtipped Photinia
<i>Phyllostachys aurea</i>	Golden bamboo
<i>Pistacia chinensis</i>	Chinese pistache
<i>Pistia stratiotes</i>	water lettuce
<i>Pyracantha coccinea</i>	Scarlet firethorn
<i>Rapistrum rugosum</i>	Bastard cabbage
<i>Ricinus communis</i>	Castorbean
<i>Roroppa nasturtium-aquaticum</i>	water cress

CITY OF SAN MARCOS NOXIOUS & INVASIVE SPECIES LIST

SCIENTIFIC NAME	COMMON NAME
Sorghum halepense	Johnson grass
Tamarix ramosissima	Salt cedar
Triadica sebifera	Chinese tallow tree
Vitex agnus-castus	Lilac Chastetree
*** Species on this list are known to have escaped landscape settings into greens spaces managed by the City of San Marcos. Preservation and planting of these noxious and invasive plants are strongly discouraged.***	

ARTICLE 4: DEFINITIONS

For the purposes of this Manual and interpretation of regulations, the following definitions shall apply:

- 1. ANSI.** American National Standards Institute; standards used by the horticulture, forestry and landscape professionals to measure and evaluate trees.
- 2. Arborist, Certified.** An individual who has demonstrated knowledge and competency through obtainment of the current International Society of Arboriculture arborist certification, or who is a member of the American Society of Consulting Arborists. A certified arborist can be found in the yellow pages of the local telephone book; or online through the Texas Chapter of ISA at www.isatexas.com or www.isa-arbor.com.
- 3. Boring.** The practice of tunneling at a depth below the effective root system of a tree, generally at a depth of 18 to 24 inches, for running underground utilities where it is not possible to trench around the critical root zone of the protected tree.
- 4. Caliper.** The minimum diameter of a tree as measured six inches above the ambient grade for trees up to and including four inches in diameter, 12 inches above the ambient grade for trees having a diameter exceeding four inches but not exceeding eight inches.
- 5. Compaction.** Compression of soil structure of texture by any means that creates an upper layer that is impermeable. Compaction is injurious to roots and the health of a tree.
- 6. Critical Root Zone.** See Tree Protection Zone
- 7. Dangerous.** See Risk Tree
- 8. Dead tree.** A tree that is dead or that been damaged beyond repair or is in an advance state of decline (where an insufficient amount of live tissue, green leaves, limbs or branches, exists to sustain life) and has been determined to be such by a certified arborist. If the tree has been determined to be dead, remove is permitted.
- 9. Diameter at Breast Height (DBH).** The diameter of the tree trunk at four and one half feet (or 54 inches) above

the natural grade for trees having a diameter greater than eight inches. The diameter may be calculated by using the following formula: $DBH = \text{circumference at 4.5-feet} \times 3.142$ ($D = C \times P$). To determine the DBH of multi-trunk trees or measuring trees on slopes, consult the current Guide for Plant Appraisal, published by the Council of Tree and Landscape Appraisers.

- 10. Disturbance.** Refers to all of the various activities from construction or development that may damage trees.
- 11. Excessive Pruning.** Removing in excess, one-fourth (25 percent) or greater, of the functioning leaf, stem or root area. Pruning in excess of 40 percent is injurious to the tree and is a prohibited act. Excessive pruning typically results in the tree appearing as a 'bonsai', 'lion's-tailed', 'lolly-popped' or overly thinned.
- 12. Injury.** A wound resulting from any activity, including but not limited to 'excessive pruning', cutting, trenching, excavating, altering the grade, paving or compaction within the tree protection zone of a tree. Injury shall include bruising, scarring, tearing or breaking of roots, bark, trunk, branches or foliage, herbicide or poisoning, or any other action foreseeably leading to the death or permanent damage to tree health.
- 13. Project Arborist.** A certified arborist (see Certified Arborist) retained by a property owner or development applicant for the purpose of overseeing on-site activity involving the welfare of the trees to be retained. The project arborist shall be responsible for all reports, appraisals, tree preservation plans, or inspections as required.
- 14. Protected Tree.** Means all trees 9 inches or greater in diameter (28.25-inches in circumference measured at 54-inches above natural grade and are not listed on the San Marcos Nonnative species list.
- 15. Protective Tree Fencing.** A temporary enclosure erected around a tree to be protected at the boundary of the tree protection zone. The fence serves three primary functions: 1) to keep the foliage crown, branch structure and trunk clear from direct contact and damage by equipment, materials or disturbances; 2) to preserve roots and soil in an intact and non-compacted state; and 3) to identify the tree protection zone) in which no soil disturbance is permitted and activities are restricted. (For size, type, area and duration of the fencing).
- 16. Public Nuisance.** Either an individual tree or shrub on any private property or in any street, or a type or species apt to destroy, impair or otherwise interfere with any street improvements, sidewalks, curbs, street trees, gutters, sewers, or other public improvements, including above and below ground utilities.
- 17. Recommended Practice.** An action, treatment, technique or procedure that may be implemented for superior care or preservation of trees.
- 18. Regulated Tree.** means any Protected Tree.
- 19. Removal.** Means any of the following:
 - a. Complete tree removal such as cutting to the ground or extraction of the tree.
 - b. Taking any action foreseeably leading to the death of a tree or permanent damage to its health or structural integrity, including but not limited to excessive pruning, cutting, girdling, poisoning, over watering, unauthorized relocation or transportation of a tree, or trenching, excavation, altering the grade, or paving within the Tree Protection Zone of the tree.
- 20. Required Practice.** A mandatory action, treatment, technique or standard of care required to be implemented by the property owner, developer, contractor or designee for the preservation of trees.
- 21. Risk Tree.** Refers to a tree that possesses a structural defect which poses an imminent risk if the tree or part of the tree that would fall on someone or something of value (target) (see Determining if a tree is
- 22. Root Buffer.** A temporary layer of material to protect the soil texture and roots. The buffer shall consist of a base course of tree chips spread over the root area to a minimum of 6-inch depth, capped by a base course of 3/4-inch quarry gravel to stabilize 3/4-inch plywood on top.
- 23. Soil Compaction.** The compression of soil particles that may result from the movement of heavy machinery and

trucks, storage of construction materials, structures, paving, etc. within the tree protection zone. Soil compaction can result in atrophy of roots and potential death of the tree, with symptoms often taking 3 to 10-years to manifest (see Compaction, Section X; and Aeration, Section X).

- 24. Soil Fracturing.** The loosening of hard or compacted soil around a tree by means of a pneumatic soil probe (AirSpade) that delivers compressed air to crack, loosen or expand the soil to improve the root growing environment.
- 25. Structural defect.** Any structural weakness or deformity of a tree or its parts. A tree with a structural defect can be verified to be hazardous by a certified arborist and confirmed as such by the Urban Forester. For the purpose of tree removal information required by the City, the tree report shall include a completed ISA-Risk Tree Assessment and basic visual assessment, reports for specimen trees may require more indepth analysis using a sounding hammer, resistograph, or compressed air or an approved equivalent. The City Arborist retains discretionary right to approve or amend a risk rating, in writing, and recommend any action that may reduce the condition to a less-than significant level of risk. If the tree has been determined to be dangerous, removal of the tree is permitted.
- 26. Target.** A term used to include people, vehicles, structures or something subject to damage by a tree. May mean people, vehicles, structures or property, such as other trees or landscape improvements. A tree may not be a danger if a 'target' is absent within the falling distance of the tree. Note: A tree may not be a hazard if a "target" is absent within the falling distance of a tree or its parts (e.g., a defective tree in a non-populated area away from pathways may not be considered a danger (see Risk Tree, Section X).
- 27. Topping.** The practice of cutting back large-diameter branches or truncating the main stem.
- 28. Tree Appraisal.** A method of determining the monetary value of a tree as it relates to the real estate value of the property, neighborhood or community. When required, a certified arborist determines the appraisal by adjusting a tree's basic value by its condition, location and species using the most recent edition of the Guide for Plant Appraisal, published by the Council of Tree and Landscape Appraisers.
- 29. Tree Protection and Preservation Plan.** A plan prepared by a certified arborist that outlines measures to protect and preserve trees on a project. This plan shall include requirements for preconstruction; treatments during demolition and/or construction; establish a tree protection zone for each tree; tree monitoring and inspection schedule; and provide for continued maintenance of those trees after construction.
- 30. Tree Protection Zone or (TPZ).** Means, unless otherwise specified by a project arborist or City Urban Forester, the area of temporary fenced tree enclosure. Within the TPZ, roots that are critical for tree survival are typically found in the upper three foot soil horizon, and may extend beyond the dripline area. Protecting the roots in the TPZ is necessary to ensure the tree's survival. The TPZ is a restricted activity zone where no soil disturbance is permitted, unless otherwise approved. TPZ must be identified for each tree and shown on all applicable improvement plans for a development project.
 - a.** Determining the TPZ also know as Critical Root Zone. Unless otherwise specified, the approved minimum TPZ shall be formulated in the following way: the TPZ radius shall require 1 foot per inch of the DBH of the trunk. For example: a 20 inch DBH = a 20-foot radius from the perimeter of the trunk—or a 40-foot TPZ. The City Arborist retains discretionary right to extend or modify the TPZ at any time.
 - b.** Shallow rocky soils with large shade trees to be preserved may require 1.5 feet per inch of diameter.
- 31. Unbalanced Crown.** Excessive pruning also includes removal of the leaf or stem area predominantly on one side, topping, or excessive tree canopy or crown raising. Exceptions are when clearance from overhead utilities or public improvements is required or to abate a hazardous condition or a public nuisance.
- 32. Urban Forester.** The person designated as such by the Director of Planning.

- 33. Tree Report.** A report submitted to the City for review that is prepared by a certified arborist retained by the property owner or agent. It includes an inventory of all trees, location, species, size, condition, maintenance needs, potential impacts of disturbance, recommended mitigation measures, tree appraisal value, etc.
- 34. Trenching.** Any excavation to provide silt fencing, irrigation, install foundations, utility lines, services, pipe, drainage or other property improvements below grade. Trenching within the TPZ is injurious to roots and tree health and is prohibited, unless approved. If trenching is approved within the TPZ, it must be in accordance with instructions and table outlined in this Manual.
- 35. Verification of Tree Protection.** The project arborist shall verify, in writing, that all pre-construction conditions have been met (tree fencing, erosion control, pruning, etc.) and are in place. An initial inspection of protective fencing and written verification must be submitted to the City.
- 36. Vertical Mulching.** aAugering, hydraulic or air excavation of vertical holes within a tree's root zone to loosen and aerate the soil, typically to mitigate compacted soil. Holes are typically penetrated 4- to 6-feet on center, 2- to 3-feet deep, 2- to 6-inches in diameter and backfilled with good soil and compost.

