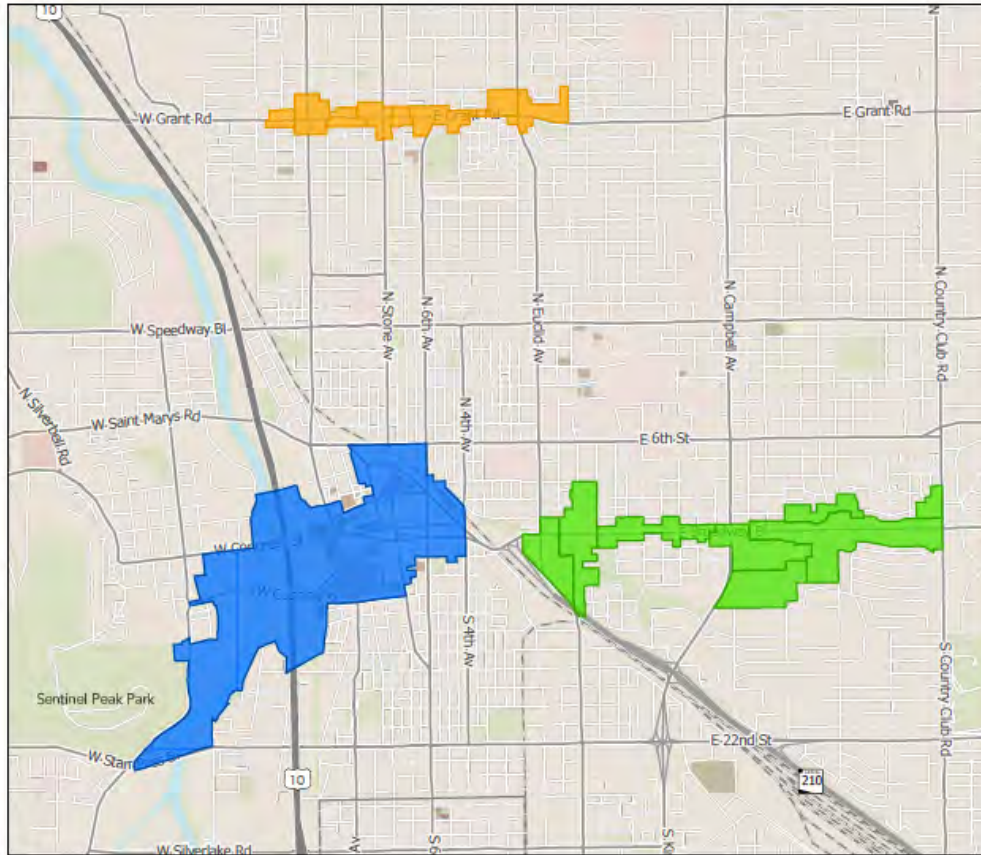


A large sculpture of a horse and a smaller sculpture of a giraffe, both made of a lattice of metal and stone, set in a desert landscape. The horse is the central focus, standing on a dark, textured base. The giraffe is to its left, also on a similar base. The background shows a desert environment with mountains in the distance under a clear blue sky.

LANDSCAPE REVIEW

DAVID MARHEFKA, PLA
DEPARTMENT OF TRANSPORTATION AND MOBILITY
CITY OF TUCSON
JULY 8, 2022



Design Review Board (DRB) Project Areas

The DRB is comprised of appointed design professionals, including architects and landscape architects, who review proposed buildings, structures, landscaping, architectural features, development plans, and site plans as set forth in the Unified Development Code (UDC).

The DRB reviews projects in the areas shown on this map. The DRB also reviews other projects throughout the city, as outlined in section 2.6.6.C of the UDC.

0 0.25 0.5 1 Miles



Legend

- Grant Road Investment District
- Rio Nuevo Area
- Sunshine Mile District

GRID-Grant Road Investment District
https://www.tucsonaz.gov/files/pdsd/codes/Ordinance_11581_and_Exhibit_A.pdf

Rio Nuevo Area
https://www.tucsonaz.gov/files/pdsd/plans/PAD/Rio_Nuevo_PAD.pdf

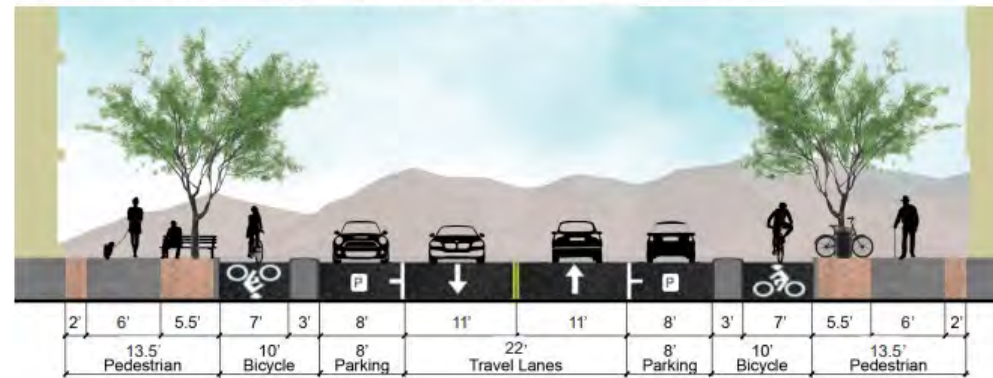
Sunshine Mile District
http://rionuevo.org/wp-content/uploads/2021/02/ZE_final_SMD_revised_020321.pdf

Others Section 2.6.6.C of UDC: Review variances in multiple area
https://codelibrary.amlegal.com/codes/tucson/latest/tucson_az_udc/0-0-0-410#JD_UDC2.2.6

DTM Engineering Division

The DTM Engineering Division provides the professional engineering, landscape architecture, survey, and administrative services necessary for the programming, design, and construction of the City of Tucson's Improvement Districts and Transportation capital improvement projects.

Section 3. 85-ft ROW, 2-lane, 2-way street, parking-protected bicycle lane



CIP DESIGN PROCESS-

Design Concept Report, 30% Plans, 60% Plans, 90% Plans, 100% Plans and Specs, 100% Sealed Plans and Specs

UDC SECTION 10 - STREET TECHNICAL STANDARD: https://codelibrary.amlegal.com/codes/tucson/latest/tucson_az_udc/0-0-0-12213

DESIGN PROJECT CHECKLIST: https://www.tucsonaz.gov/files/transportation/engineering/APG_03_DesignProjChecklist.pdf

Landscape Active Practice Guidelines

There are (3) Active Practice Guidelines that are followed for all City of Tucson Road Project:

<https://www.tucsonaz.gov/tdot/professional-landscape-architects>

Page 1 of 6

CITY OF TUCSON, ARIZONA
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION
ACTIVE PRACTICES GUIDELINES

UPDATED 07/22/09

PREPARED BY: Gary Wittwer EFFECTIVE: 7-24-09
APPROVED BY: [Signature] DATE: 7-24-09
City Engineer

SUBJECT: LANDSCAPE DESIGN GUIDELINES

A. GENERAL:

- All design work will utilize the most current edition of the Pima County / City of Tucson, Standard Details and Specifications for Public Improvements, this Engineering Active Practices Guideline, and the Tucson Department of Transportation (TDOT) standard details and equipment list approved by the City Engineer's office.
- All projects shall conform to the City's Native Plant Protection Ordinance - NPPO plans shall be submitted to TDOT first. TDOT will submit to Development Service Department. Approved NPPO plans shall be incorporated into the construction documents.
- All projects shall conform to State and Federal protected and endangered species laws.
- All projects shall incorporate water harvesting as per City Water Harvesting Guidance Manual, as noted in section "E" of this document and as per the "Water Harvesting Active Practice Guidelines.
- All projects and design work shall conform to the City of Tucson Development Standards and the Landscape Irrigation Efficiency Ordinance.
- All projects shall utilize TDOT standard details and irrigation equipment. (details are available on disc).

B. DESIGN CONCEPT AND INTENT:

The Landscape Consultant shall provide a landscape design concept report at the Engineer's 30% submittal to include the following:

- Preliminary site analysis and inventory.

Landscape Design APG

Page 1 of 8

City of Tucson Department of Transportation
Active Practice Guideline - Update 5/11/17
May 11, 2017

Subject: Native Plant Preservation - Protection, Salvage, and Transplanting for Roadway Projects

I. Introduction

Roadway construction and other transportation projects often have difficulty in meeting the requirements of the City of Tucson Native Plant Preservation Ordinance (Refer to City of Tucson Land Use Code Section 3.8.1.). The reasons include the linear character of roadway design, limited right-of-way, location of underground and overhead utilities, planting offset from utilities, sight-visibility restrictions, easements, and clear-zone requirements. Thus the opportunities to preserve in place and the mitigation of native plant communities within the right-of-way (ROW) are limited. This Active Practice Guideline (APG) shall establish a protocol for documenting native plant species within the construction project limits, and describe how to develop a Native Plant Preservation Plan for City of Tucson Department of Transportation (TDOT) roadway construction projects.

A. Purpose: This APG has been developed to preserve and protect native plants within the City of Tucson ROW during all road expansions and new construction projects. It has been developed to fully meet the intent of City of Tucson Native Plant Preservation Ordinance, but is simplified and allows for an efficient approach to the unique challenges of transportation projects.

B. Objective: To preserve native plant communities to the fullest extent possible, and enhance or restore the native Sonoran desert landscape within City of Tucson transportation corridors. This APG shall assist the Landscape Consultant in maintaining a sense of identity within the City of Tucson as well as the Sonoran Desert while meeting the intent of the City's ordinance.

C. Scoping Considerations: The TDOT Project Manager shall provide a copy of this APG to the Engineering consultant to be reviewed and considered during project scoping. During project scoping, the scale, character, and location of the project shall determine the applicable format of the Native Plant Preservation Plan. The City shall identify project type to the consultants during the scoping phase. There are two types of Projects:

Type A Projects are characterized by primarily native vegetated areas that may include undisturbed native plant communities.

Type B Projects are characterized as denser urban areas with less vegetation.

Deliverables for Type A and B projects are discussed under Section III below.

April 3, 2017

Native Plant Preservation APG

Page 1 of 8

CITY OF TUCSON, ARIZONA
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION
ACTIVE PRACTICES GUIDELINES

UPDATED 08/06/13

PREPARED BY: GARY WITTWER EFFECTIVE: 08-06-13
APPROVED BY: [Signature] DATE: 08-06-13
DIRECTOR OF TRANSPORTATION

SUBJECT: GREEN STREETS

A. DEFINITIONS:

- Basin:** The area footprint which identifies the total area of detained or retained runoff.
- Bottom of Basin:** The flat area of the basin or the basin area minus the side slopes.
- Green Infrastructure:** Landscape and engineering features that utilize soils and vegetation to manage stormwater for multiple environmental and community benefits. These features, as described in *Pima County and City of Tucson Guidance Manual for Low Impact Development and Green Infrastructure* (in process), include but are not limited to, curb scrapers, curb depressions, cone drills, water harvesting basins, swales, bio-retention basins, berms, check dams, infiltration trenches, and active water harvesting/storage systems.
- Green Streets:** Roadways that incorporate the use of Green Infrastructure.
- Mature Tree Canopy:** The estimated diameter of leafy vegetation of a given tree.
- Project Manager:** The City of Tucson, Department of Transportation individual who is appointed to oversee the project.
- Shrub, Grass and Groundcover Requirement:** A minimum 25% recommended vegetative coverage of the bottom of basin area.
- Tree Canopy Area:** The area that can be planted with trees without sight visibility or utility conflicts. The shade for each tree shall be calculated at an average of 18' mature diameter in order to provide the recommended minimum 25% coverage of the tree shade area.

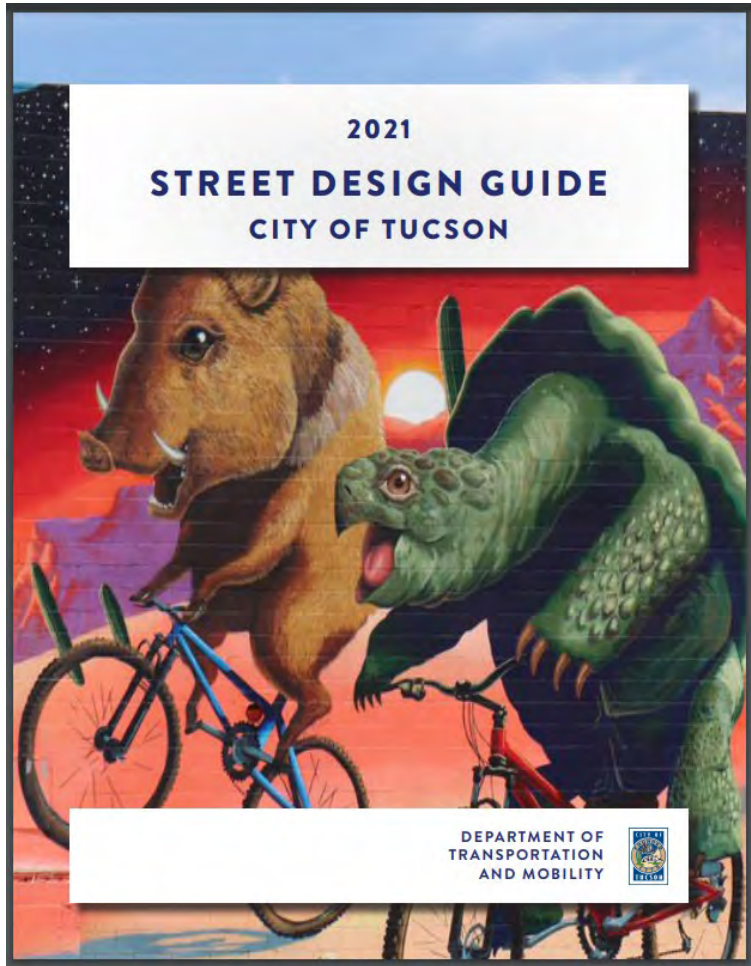
B. INTENT:

The intent of these guidelines is to require the incorporation of green infrastructure features into Tucson roadways wherever possible. The costs and benefits of green infrastructure shall be evaluated and determined for all new projects and shall be included within the project budget.

Exhibit A to Resolution 22116

Green Streets APG

Complete Streets Guide



Common elements of Complete Streets applicable across contexts include:


- Safe, accessible, visible, and comfortable pedestrian walkways
- Safe and comfortable bikeways and crossings
- Appropriately sized and designed travel lanes and roadways
- Accommodations for commercial vehicles and deliveries
- Attractive, inviting, and welcoming public spaces

https://www.tucsonaz.gov/files/transportation/files/Tucson_Street_Design_Guide_Approved.pdf

ADWR Plant List


Arizona Department of Water Resources
Tucson Active Management Area

Low Water Use/
Drought Tolerant
Plant List



Official Regulatory List for the Tucson Active Management Area
Fourth Management Plan

Arizona Department of Water Resources
1110 W. Washington St, Suite 310
Phoenix, AZ 85007
www.azwater.gov
602-771-8585



The list of plants in this document was prepared in 2010 by the Arizona Department of Water Resources (ADWR) in cooperation with plant and landscape plant specialists from the Tucson AMA and other experts.

Tucson Active Management Area Low Water Use/Drought Tolerant Plant List

TREES, plus T/shrub, T/accnt

WU	BOTANICAL NAME	COMMON NAME	FLOWER COLOR	BLOOM SEASON	PT	H	W	GS	TDX-IC	AL	INV	SCA	F	ORIGIN
2	<i>Acacia aneura</i>	Mulga	Yellow	Spring	T	18	18	Su		c			20	Austr.
3	** <i>Senegalia berlandieri</i> / <i>Acacia berlandieri</i>	Guajillo	White	Summer	T, S	15	15	Su		c			20	CD
1	** <i>Vachella constricta</i> / <i>Acacia constricta</i>	Whitethorn, Mescat Acacia	Yellow	Spring to Summer	T, S	20	20	Su		c	Yes	Yes	5	SD, CD
1	<i>Acacia craspedocarpa</i>	Waxleaf Acacia	Yellow	Spring to Summer	T, S	15	15	Su		c			15	Austr.
2	<i>Acacia cultriformis</i>	Knife-Leaf Acacia	Yellow	Spring	T, S	15	15	Su		c			20	Austr.
3	** <i>Vachella farnesiana</i> var. <i>farnesiana</i> / <i>Acacia farnesiana</i> (small)	Southwestern Sweet Acacia	Yellow	Spring	T, S	25	25	Su		c	Yes	Yes	12	SD, CD
1	** <i>Senegalia greggii</i> / <i>Acacia greggii</i>	Catclaw Acacia	Creamy Yellow	Spring to Summer	T, S	15	20	Su		c	Yes	Yes	0	SD, CD
2	** <i>Vachella rigidula</i> / <i>Acacia rigidula</i>	Black Brush Acacia	Yellow	Spring	T, S	15	9	Su		c			20	CD
2	<i>Acacia salicina</i>	Willow Acacia	Creamy White	Spring	T	40	30	Su		c			20	Austr.
2	<i>Acacia saligna</i>	Weeping Wattle	Orange-Yellow	Early Spring	T	25	20	Su		c			15	Austr.
3	** <i>Vachella schaffneri</i> / <i>Acacia schaffneri</i>	Twisted Acacia	Yellow	Spring	T	20	25	Su		c			17	CD
2	<i>Acacia stenophylla</i>	Pencilleaf Acacia	Creamy White	Early Spring	T	30	20	Su		c			18	Austr.
2	** <i>Manosussua willardiana</i> / <i>Acacia willardiana</i>	Palo Blanco	Pale Yellow	Spring	T	20	10	Su		c			25	SD
2	<i>Brachychiton populneum</i> (<i>Sterculia diversifolia</i>)	Bottle Tree	Pink	Late Spring	T	45	30	Su					18	Austr.
3	** No record of Plant (?) <i>Brahea</i> (<i>Erythraea armata</i>)	Mexican Blue Palm	White	Spring	T	30	10	Su		c			15	SD
3	<i>Callistemon citrinus</i>	Lemon Bottlebrush	Red	Off and on all year	T, S	15	10	Su		c			10	Austr.
2	<i>Casuarina cunninghamiana</i>	Australian Pine			T	70	35	Su		b			20	Austr.
2	** <i>Allocasuarina verticillata</i> / <i>Casuarina stricta</i>	Coast Beefwood			T	35	25	Su		b			15	Austr.
3	<i>Celtis reticulata</i>	Nettleleaf or Western Hackberry	Greenish	March through Summer	T	30	30	Su		a			-20	SD, CD

4

https://new.azwater.gov/sites/default/files/media/TAMA2015LWUPL_0.pdf

Required Utility Setbacks



Where can trees be planted?

Required Plant Setbacks from U.G. Utilities				
	<u>Large Tree over 20'</u>	<u>Plants under 20' tall</u>	<u>Plants under 3'</u>	
SW Gas	8'	5'	3'	
Pima C. Sewer	16' 10' if sewer line is deeper than 8'	10'	5'	
Electric UG	3'	3'	3'	
Tucson Water	10'	5'	3'	
Cable / Fiber Opt	8'	5'	3'	
No Planting in El Paso Gas Easements				

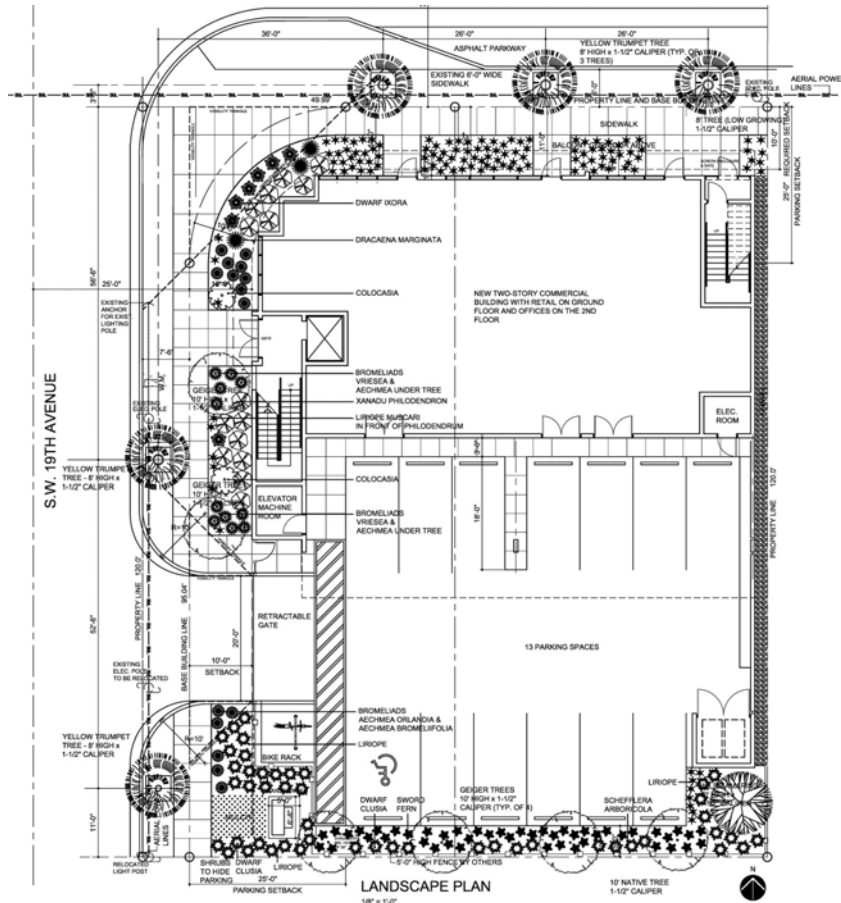
<https://www.tucsonaz.gov/files/transportation/files/setbacks.pdf>

Use of 5 Feet of ROW for Bufferyard

Case by Case Basis

- Planning and Development Services (PDS) required landscape bufferyard which are intended to be on site in back of the ROW line
- In special cases up to 5' of the bufferyard may be placed within the ROW
- There must be some existing site constraint that prohibits the placement on site before TDOT will consider utilization of the ROW for bufferyard planting
- Approval must be granted early in the Design Process

<https://www.tucsonaz.gov/tdot/commercial-property-landscaping>



Planting in the ROW



Residential Areas

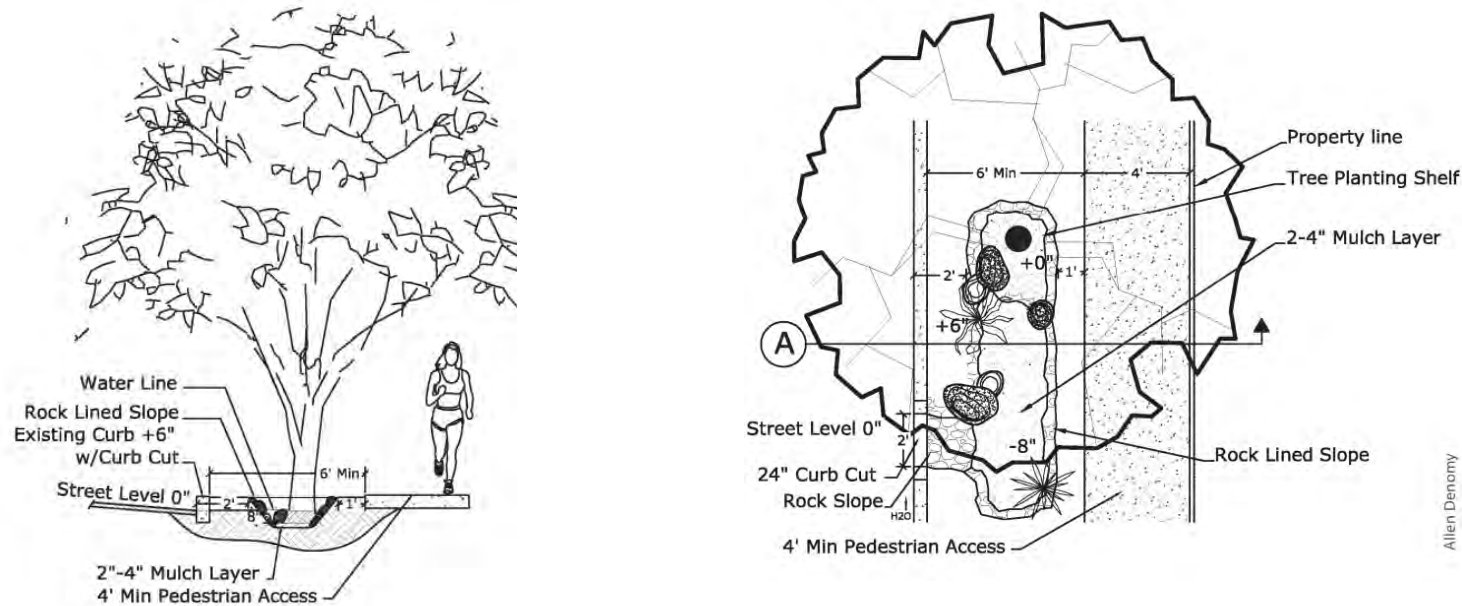
- The City encourages properties to add landscaping within the ROW where possible up to the back of curb, but there are several rules and requirements.
- There must always be a minimum 5' wide clear pedestrian access across the property.
- Sight visibility triangles (SVT) must be clear.
- No tree or large shrub planting within 50' of a stop, yield or speed limit sign.
- No large tree planting under power lines.
- Plant locations must maintain setbacks from underground utilities.
- Planting in the ROW should be approved by the TDOT landscape architect and the owner must understand the "Standard Notes for Planting in the ROW".
- All water harvesting and curb cuts or curb core drills within the ROW must submit for a Right-of-Way Permit prior to installation.
- The property owner understands that the City or a utility company may need to remove the landscaping in order to repair facilities and will not replace landscape or irrigation.

<https://www.tucsonaz.gov/tdot/residential-property-landscaping>

Green Infrastructure – Behind the Curb

Non required PDSD water harvesting may be incorporated within the ROW under the following conditions:

- Water depth is less than 8"
- Water does not cross over the public sidewalk
- Water does not stand longer than 24 hours
- Plans are submitted and approved by TDOT Stormwater

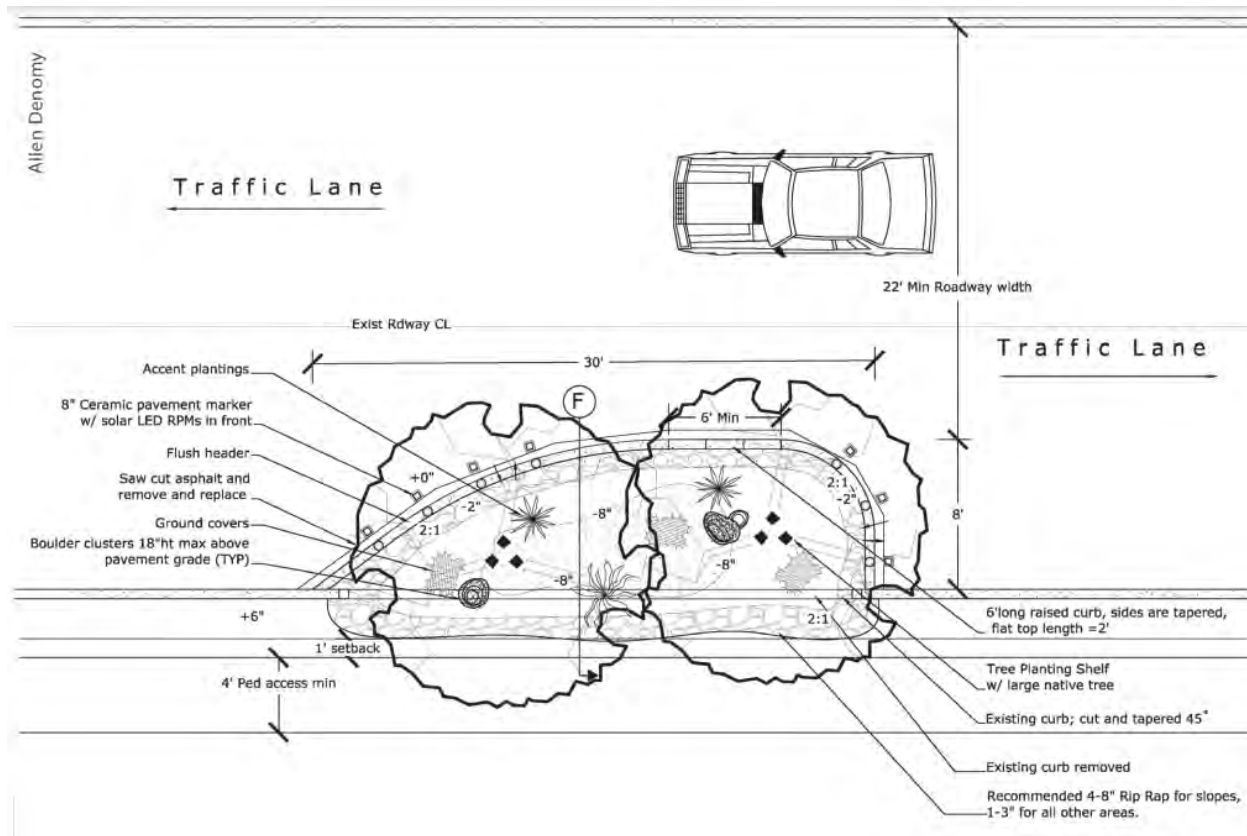


https://www.tucsonaz.gov/files/transportation/landscape/B3_rock-edged.pdf

Green Infrastructure – Behind the Curb

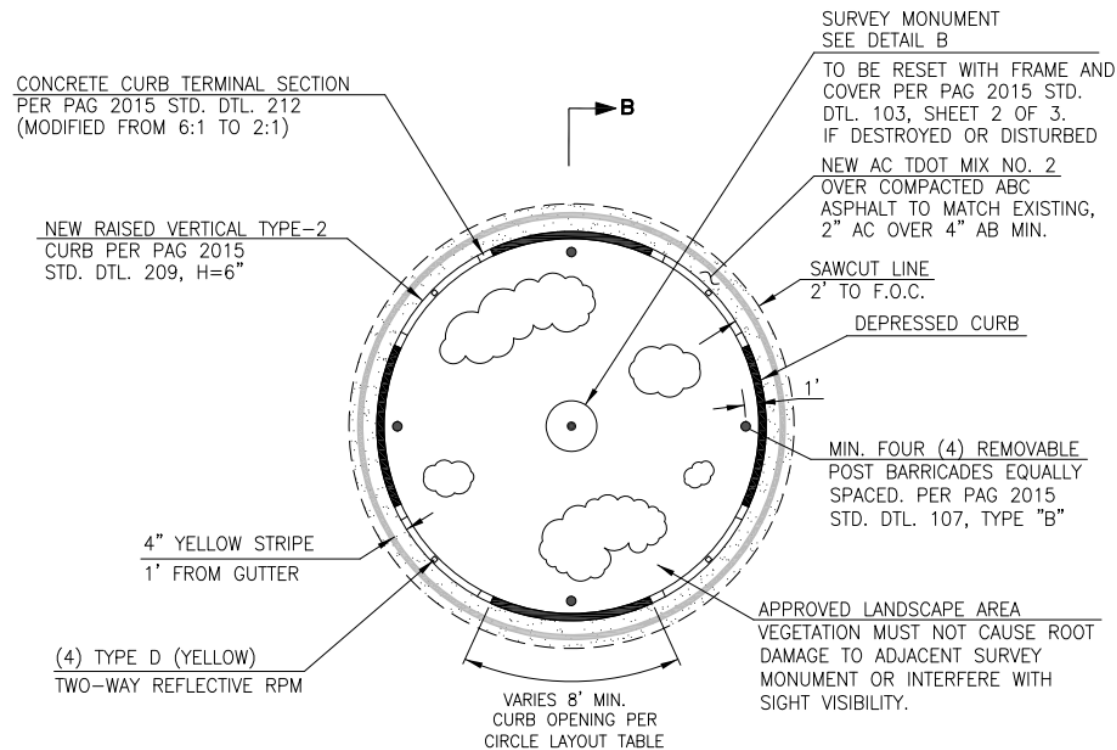


Green Infrastructure – In the Street - Chicane



https://www.tucsonaz.gov/files/transportation/landscape/B5_chicane.pdf

Green Infrastructure – In the Street – Traffic Circle



A photograph of a paved pedestrian path lined with trees and desert plants, with a person walking away from the camera. The path is made of light-colored concrete slabs. On the left side, there are several large saguaro cacti and various shrubs. On the right side, there are tall, thin grasses and smaller shrubs. The path is shaded by the trees overhead, and the overall scene is bathed in warm, golden light, suggesting late afternoon or early morning. In the background, other people can be seen walking on the path.

Key takeaways

- Utility locations often drive design
- Right Tree Right Place
- ROW Permit Required
- On-site Meeting Required prior to issue of Permit