

GSI Mini-Grants - GSI Cheat Sheet

The purpose of the GSI 'Cheat Sheet' is to illustrate the most commonly installed project types funded through the GSI Mini-Grants program. In many cases, one or a combination of several of these GSI treatments can be used to address a multitude of neighborhood issues. If your neighborhood group is interested in the GSI Mini-Grants Program, please contact TCB staff to discuss: GSIMG@tucsoncleanandbeautiful.org

Parcel to Pocket Park



Curb Cuts/Basins



Street-side Basins for Curbless Streets



Chicanes/Curb Extensions



Traffic Circles



GSI at City Parks



Traffic Median GSI Retrofit



Neighborhood Tree Planting



PARCEL TO POCKET PARK



Robison Elementary parking lot basin



Montevideo Neighbors planting their parcel



Treat Ave. well site planting day

What is it:

In many Tucson neighborhoods, vacant, city-owned parcels provide excellent opportunities to harvest stormwater and create neighborhood green space and wildlife habitat. With the addition of simple GSI features, these parcels that are sometimes considered problematic can become beautiful and functional pocket parks.

GSI Features/Components:

Stormwater harvesting basins, rain gardens, berms, swales, elevated walkways, trees and shrubs, mulch, boulders

Where can this be installed and what kinds of issues can it address:

Where: City-owned parcels with permission from city department (i.e. right-of-ways, Tucson Water well sites, Department of Transportation parcels, Parks and Rec parcels)

Issues: Flooding, erosion, low tree canopy, urban heat island, lack of access to green space, illegal dumping, neighborhood beautification, traffic calming, illegal parking

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

Medium to High
\$8,000 - \$20,000

*Cost will vary depending on size, scale, and GSI treatments

Examples:

Barrio Viejo - W Cushing St. / S Fire Central Pl.
El Montevideo - E Calle Altar / N Alvernon Wy.
Treat Ave Well Site - N Treat Ave. / E Alturas St.

CURB CUTS/BASINS



Full basin at Richland Heights East



Ft Lowell Park Neighborhood basin



Richland Heights East curb cuts

What is it:

Tucson's roadways have been designed as stormwater systems, quickly channeling water to nearby washes and street drains. Creating curb cuts and basins along streets pulls water off the road to support trees and other vegetation, and it lightens the load on City infrastructure. Basins and curb cuts capture stormwater and better utilize this resource to support tree canopy closer to roads where pedestrians, cyclists and neighbors can benefit from the extra shade.

GSI Features/Components:

Stormwater harvesting basins, system of basins, curb cuts, curb cores, rain gardens, trees and shrubs, mulch, boulders

Where can this be installed and what kinds of issues can it address:

Where: Public right-of-ways (i.e. wide planting strips between curbs and sidewalks, near driveway entrances, spaces between private property and the street)

Issues: Flooding, water ponding, low tree canopy, urban heat island, neighborhood beautification, traffic calming

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

Low to High
\$5,000 - \$20,000

*Cost will vary depending on size, scale, and GSI treatments

Examples:

Ft Lowell Park Neighborhood - E Alta Vista St. / N Van Buren Ave.
Nash Elementary School - W Jacinto St. / N 14th Ave.
Barrio Kroeger Lane - S Kroeger Ln. / W 20th St.

STREET-SIDE BASINS FOR CURBLESS STREETS



Barrio Santa Cruz basin outside residence



San Clemente street side basins



Barrio Santa Cruz basin along Santa Cruz Lane

What is it:

Curbless streets next to an unpaved right-of-way provide an excellent opportunity for water harvesting off of asphalt. Runoff from the road can be used to supplement vegetation, and new plants and grasses can help filter stormwater. Street-side trees can help calm traffic by reducing the perceived width of the road and provide shade for users on the street.

GSI Features/Components:

Stormwater harvesting basins, system of basins and rock work, erosion control, raingardens, swales, trees and shrubs, boulders

Where can this be installed and what kinds of issues can it address:

Where: Public right-of-ways (i.e. area between street edge and private property, street corners, adjacent to speed humps and other engineered traffic calming devices on curbless streets)

Issues: Flooding, standing water, erosion, low tree canopy, urban heat island, lack of access to greenspace, illegal dumping, neighborhood beautification, traffic calming, illegal parking

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

Low to Medium
\$5,000 - \$16,000

Examples:

Barrio Santa Cruz - S Santa Cruz Ln. / W 25th St.
San Clemente - S Irving Ave. / E Whittier St.
Rillito Bend - N Country Club Rd. / E Prince Rd.

*Cost will vary depending on size, scale, and GSI treatments

CHICANES/CURB EXTENSIONS



Barrio Kroeger Lane



Robison Elementary School



El Presidio

What is it:

Chicanes can be used as a traffic calming device and a method of capturing stormwater that runs along the outside edge of roads. Chicanes physically narrow the street and pinch traffic together to slow cars. Trees, shrubs and grasses are planted inside the chicane to infiltrate stormwater and shade the street.

GSI Features/Components:

Flush curbs, raised curbs and reflective markers for safety, raingardens, swales, trees and shrubs, rock mulch, boulders

Where can this be installed and what kinds of issues can it address:

Where: City of Tucson neighborhood streets with permission of Dept. of Transportation and Mobility, school zones, wide neighborhood streets

Issues: Traffic calming, speeding, cut-through traffic, flooding, ponding, low tree canopy, neighborhood beautification

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

Medium to High
\$12,000 - \$20,000

*Cost will vary depending on size, scale, and GSI treatments

Examples:

El Presidio - W Franklin St. / N Court Ave.
Dodge Flower - E Bermuda St. / N Richey Blvd.
Barrio Kroeger Lane - W 18th St. / S Freeway Rd.

TRAFFIC CIRCLES



Pueblo Gardens Traffic Triangle



Dodge Flower Traffic Circle



A Mountain Traffic Circle

What is it:

Traffic circles are an effective traffic calming measure that can be used to slow and control traffic at busy and/or confusing and dangerous intersections. When GSI treatments are included, traffic circles can harvest rainwater for vegetation, beautify the neighborhood, establish tree canopy and wildlife habitat, and calm traffic.

GSI Features/Components:

Curb cuts, flush curbs, reflective markers for safety, stormwater harvesting basins, raingardens, berms, swales, trees and shrubs, mulch, boulders

Where can this be installed and what kinds of issues can it address:

Where: City of Tucson Intersections with approval from the Department of Transportation and Mobility, and 60% of adjacent neighbors.

Issues: Speeding, unsafe intersections, traffic calming, flooding, low tree canopy, neighborhood beautification, lack of access to greenspace

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

High
\$16,000 - \$30,000

*Cost will vary depending on size, scale, and GSI treatments

Examples:

San Gabriel - S Longfellow Ave. / E Monticeto St.
Pueblo Gardens - S Forgeus Ave. / S Forgeus Strav.
Dodge Flower - N Richey Blvd. / E Bermuda St.
A Mountain - W Cedar St. / S Sentinel Peak Rd.



Parks and Recreation Building - Reid Park



Francisco Elias Esquer Park



Catalina Park

What is it:

There are often valuable opportunities to harvest stormwater in our local city parks. Parking lots, paved areas, and buildings are some of the impermeable surfaces in our parks that may cause increased stormwater runoff, flooding, and erosion. Utilizing this runoff for trees and other vegetation can help address neighborhood concerns related to stormwater, tree canopy, beautification, and much more.

GSI Features/Components:

Stormwater harvesting basins, raingardens, berms, swales, elevated walkways, trees and shrubs, mulch, boulders

Where can this be installed and what kinds of issues can it address:

Where: City-owned and managed parks with permission from Tucson Parks and Recreation Department

Issues: flooding, erosion, low tree canopy, plant , neighborhood beautification, traffic calming, illegal parking

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

Medium to High
\$8,000 - \$20,000

*Cost will vary depending on size, scale, and GSI treatments

Examples:

Palo Verde Park - 425 S Mann Ave, Tucson, AZ 85710
Catalina Park - 941 N 4th Ave, Tucson, AZ 85705
Esquer Park - 1415 N 14th Ave, Tucson, AZ 85705



TRAFFIC MEDIAN GSI RETROFIT



Aerial photo of Rolling Hills median retrofit



Reid Park parking lot



Neighborhood volunteers on planting day

What is it:

Wide medians that separate traffic on streets or in parking lots can be an example of what a more contemporary and low maintenance urban landscape can look like. Medians without curbs located in the middle of a concave street are a great opportunity for water harvesting, and curbcuts and cores can be added to medians with raised curbs to let water in.

GSI Features/Components:

Stormwater harvesting basins, curb cuts, curb cores, raingardens, berms, swales, trees and shrubs, mulch, boulders

Where can this be installed and what kinds of issues can this address:

Where: Medians in public right-of-ways and parking lots with permission from Dept. of Transportation and Mobility

Issues: Flooding, erosion, low tree canopy, illegal parking and driving, neighborhood beautification, traffic calming, outdated high-maintenance landscape

Maintenance:

Watering of new plantings (minimum 2 years), monthly removal of trash, debris and weeds, quarterly GSI feature check and if needed some repair, re-apply mulch as needed (annually)

Cost:

Medium to High
\$8,000 - \$20,000

Examples:

Rolling Hills - E 29th St. / S Pantano Pkwy.
Parks and Rec Building in Reid Park parking lot

*Cost will vary depending on size, scale, and GSI treatments

NEIGHBORHOOD TREE PLANTING



Shady street in Palo Verde Neighborhood



Street side planting in Barrio Centro



Volunteer Tree Planting Group

What is it:

Sometimes the simplest solutions can be the best solutions. Tree planting is an effective and impactful green stormwater infrastructure strategy. Trees cool our neighborhoods, intercept stormwater and aid in infiltration, cleanse our air and water, improve our health and well being, calm traffic and create new community connections. It is often the most feasible GSI strategy for neighborhood groups interested in projects that can benefit their entire neighborhood.

GSI Features/Components:

Trees, shrubs, stormwater harvesting basins, berms, curb cuts, raingardens, mulch, boulders

Where can this be installed and what kinds of issues can this address:

Where: City-owned parcels with permission from city department i.e. right-of-ways, Tucson Water well sites, Department of Transportation parcels, Parks and Rec parcels

Issues: flooding, erosion, low tree canopy, lack of access to greenspace, illegal dumping, neighborhood beautification, traffic calming, illegal parking

Maintenance:

Watering of new plantings (minimum 2 years)

Cost:

Low
\$1,000 - \$3,000

*Cost will vary depending on size, scale, and GSI treatments

Examples:

Barrio Centro, Julia Keen, Pueblo Gardens, Barrio Santa Cruz, Arroyo Chico, Sunnyside, Barrio Kroeger Lane, Las Vistas, Mountain First, Broadmoor Broadway