



Mission:

***To improve rural and urban livelihoods through
integrating community development and
conservation.***

Green Streets - Green Neighborhoods

www.watershedmg.org/green-streets

Goal: Help cities & neighborhoods improve environment & quality of life through integrated green infrastructure approaches.

How we work:

- Use GI to address disparate neighborhood problems
- Build neighborhood leadership capacity
- Promote volunteerism
- Empower residents with hands-on skills and understanding of issues

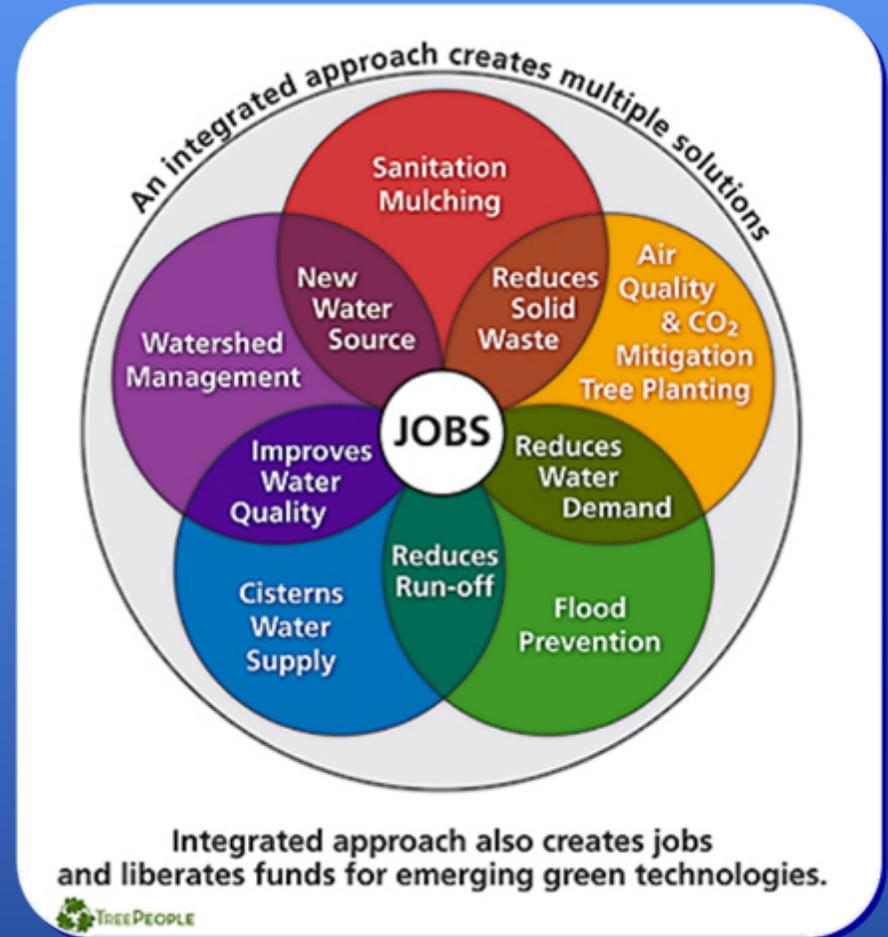


Community-based green infrastructure

- Lower cost
- Experimentation
- Education
- Community development
- Political will



An integrated approach



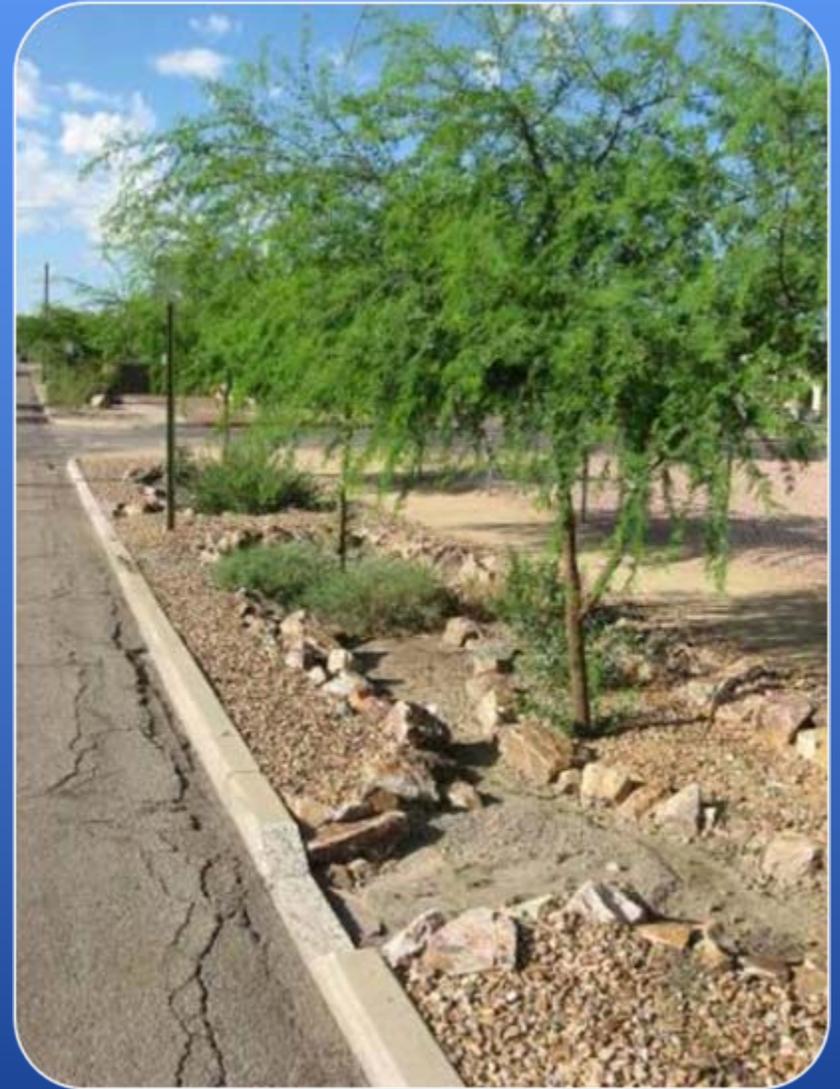
Images provided courtesy of TreePeople, treepeople.org

2008-2010: WMG Neighborhood GI Retrofit Model

- Partnership with Tucson's Rincon Heights neighborhood, Trees for Tucson, UA, TDOT
- Installed GI features on 10 blocks through public educational workshops
- Created neighborhood pocket park demonstrating GI and green building approaches
- Leveraged work on 8 more UA properties in the neighborhood



Right-of-way green infrastructure





Neighborhood Pocket Park







Chicanes &
Traffic Calming

Street width reductions

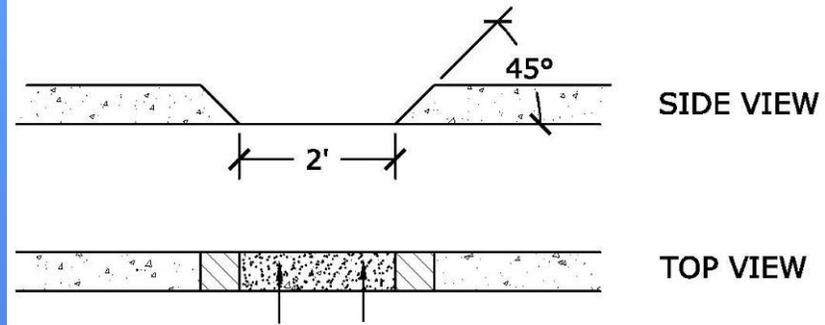


Flush-curb chicanes

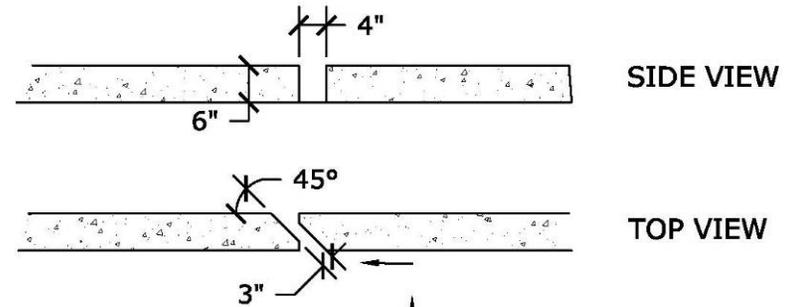


Greening alleys

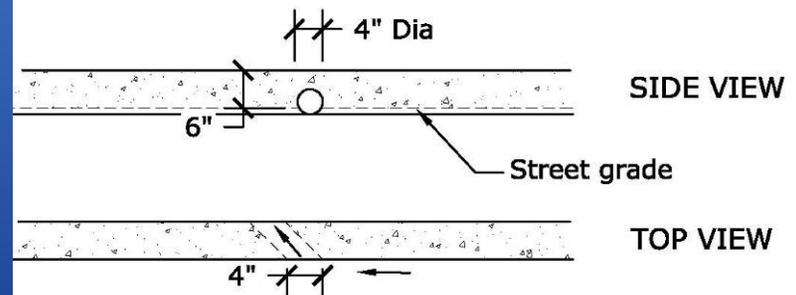
Curb Cuts



24" CURB CUT

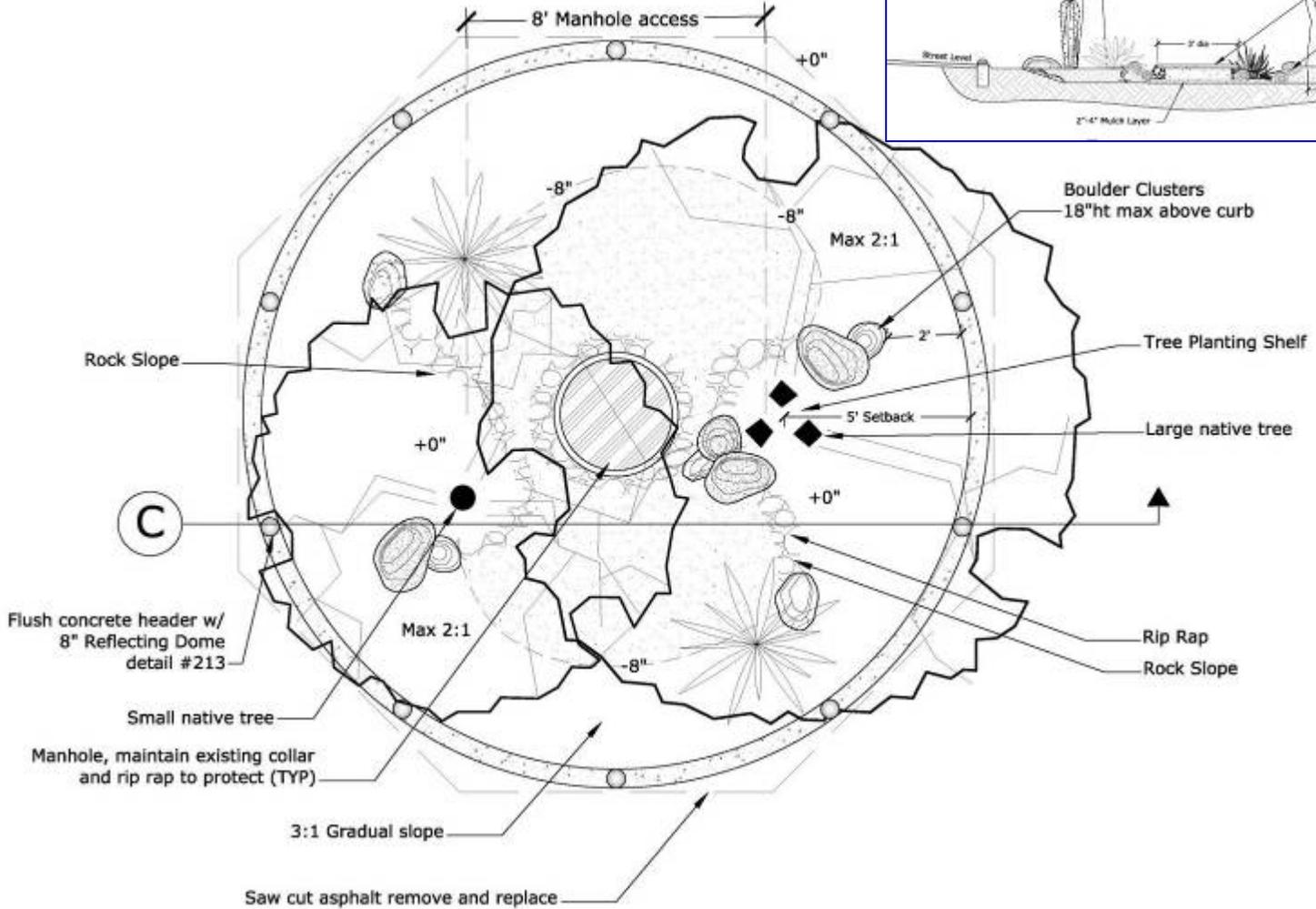
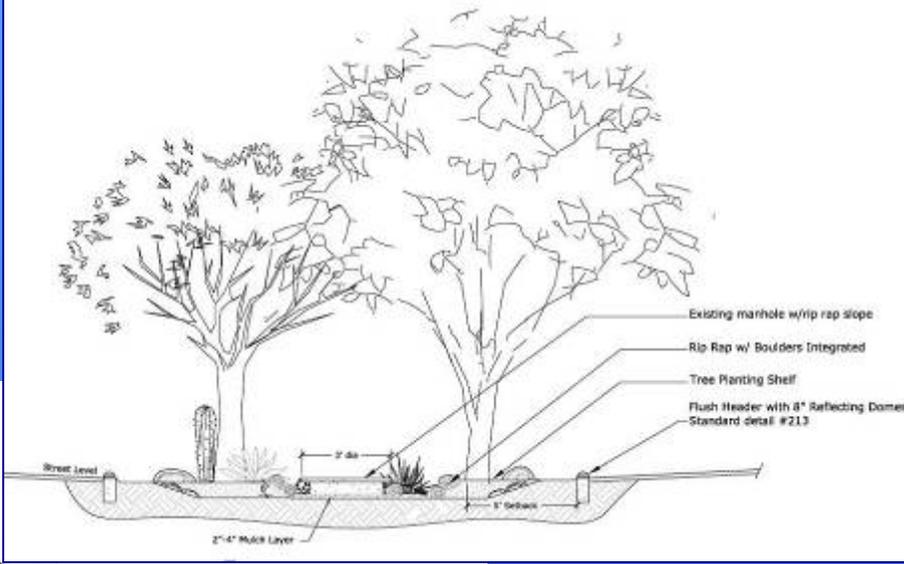


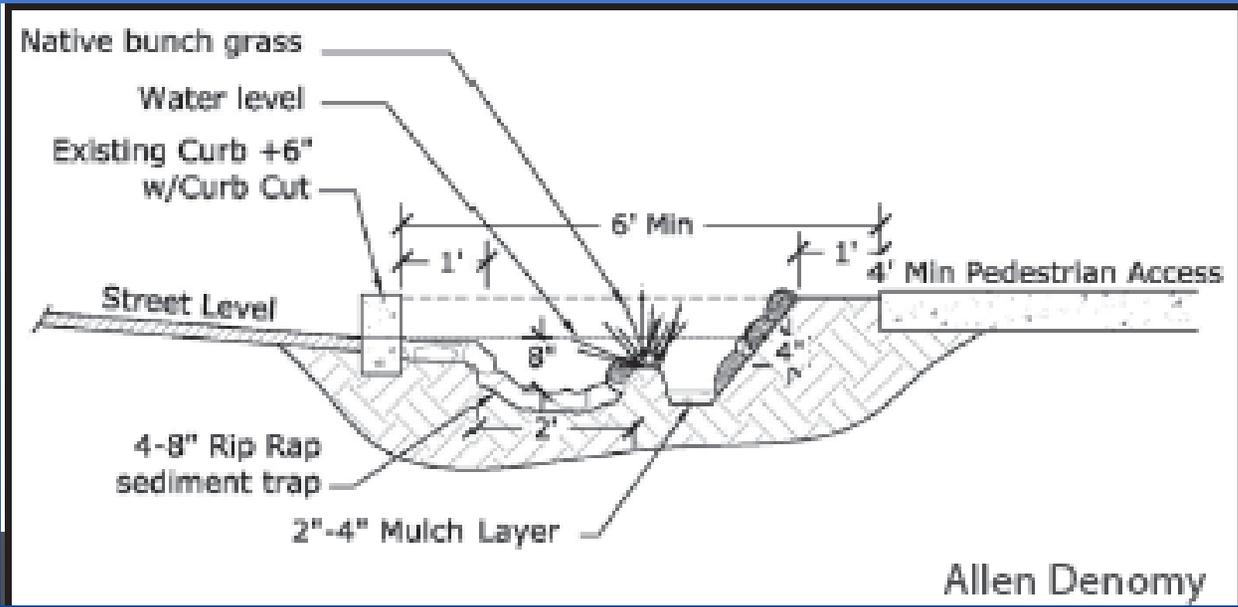
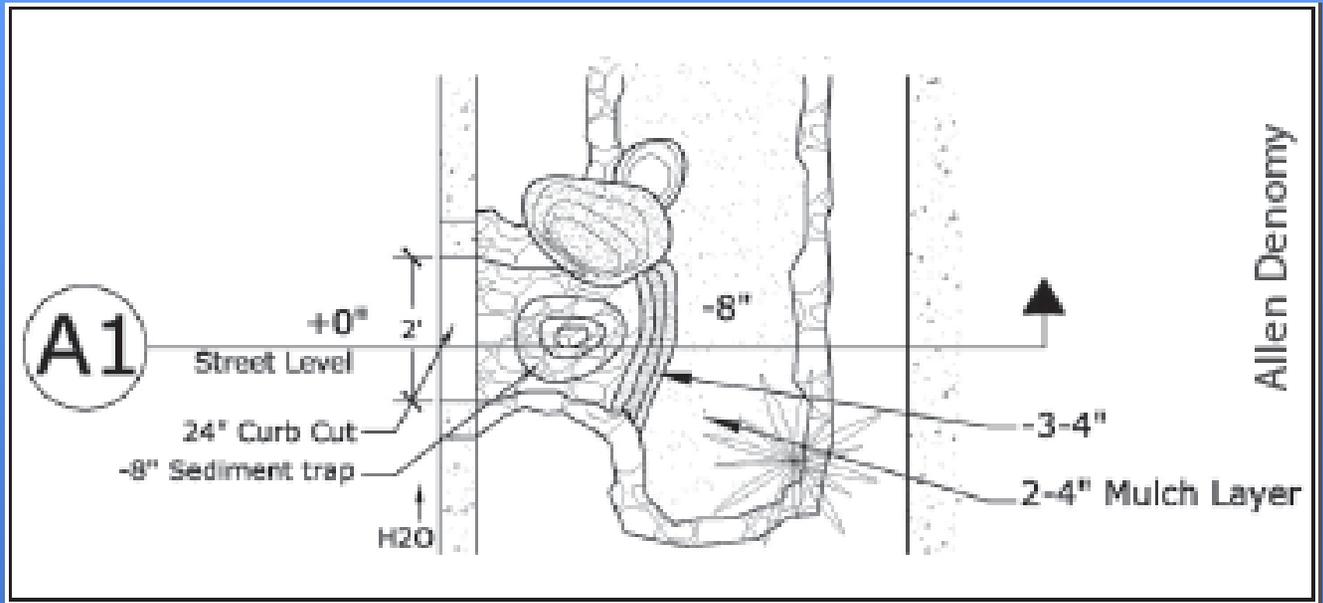
3" CURB SLICE



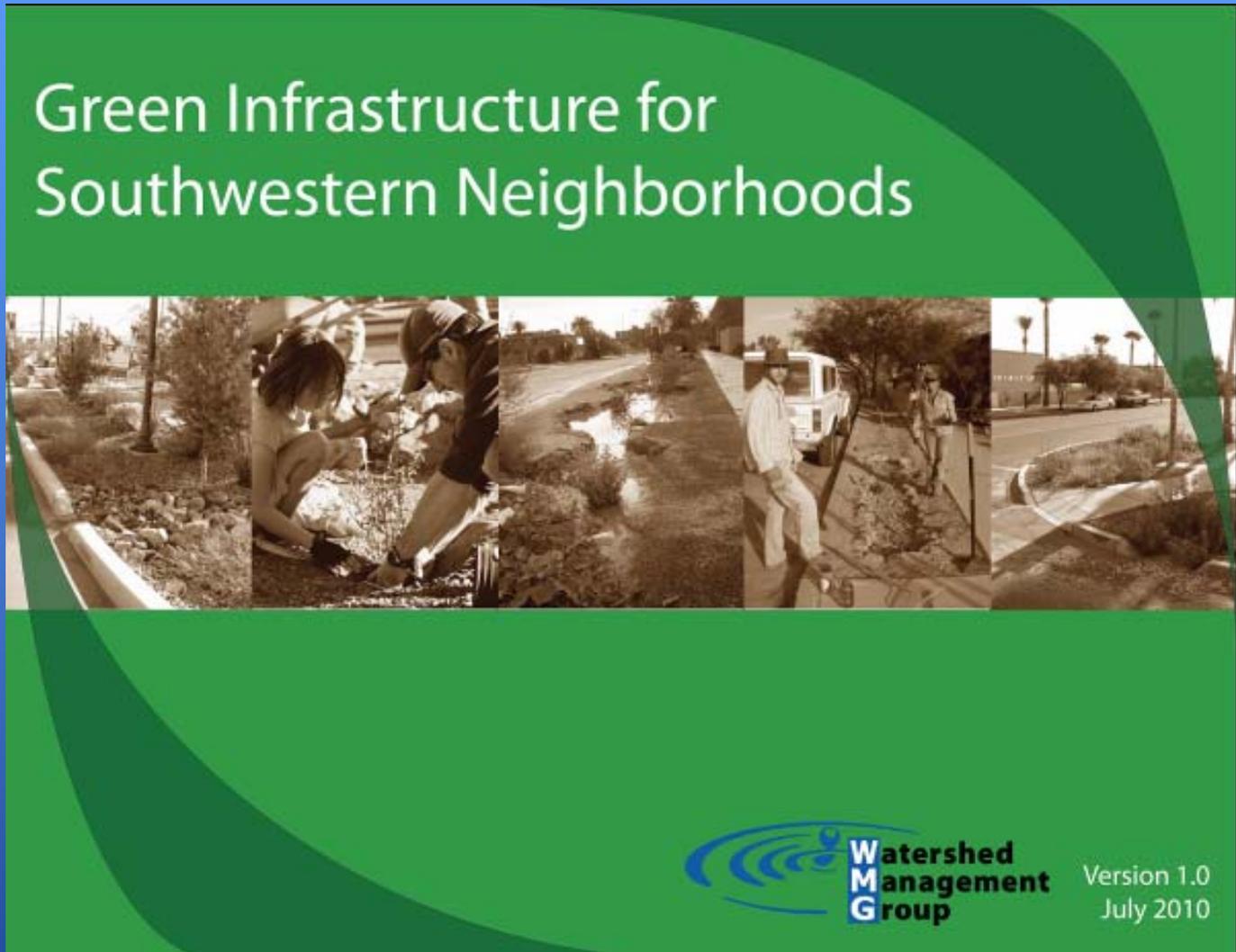
4" DIA ANGLED CURB CORE

Resources: GI details





Resources: GI Manual



Available at: watershedmg.org/green-streets

Resources: GI Manual

Streetside practices: curb cut & basin, rock-lined edges

To collect and infiltrate stormwater from curb cuts into the right-of-way, bioretention basins must be excavated in the ROW to a depth below street level. Rocks are used to prevent erosion along the sides of the basin.

Function

Advantages

- Can be used to collect stormwater from streets into ROWs as narrow as 5' wide
- Rock edges create a delineated area for mulch and planting

Disadvantages

- Rock edges often stand out in landscape (for better or for worse)
- Rock edge and basin may be considered a trip and/or fall hazard
- Basin slopes can erode if not properly lined with well-placed rock

Site selection

- Follow site selection guidelines for curb cuts (p. 17) and vegetation (p. 9).
- Minimum width of earthen area between the

curb and sidewalk/path must be at least 6' wide in areas with on-street parking (5' without parking).

- Avoid streets with slopes greater than 5%.
- Maintain setbacks from above- and below-ground utilities as required.

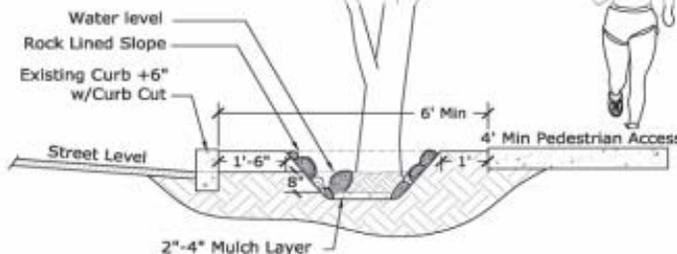
Design and construction

- Excavate bottom of basin 10"-12" below the surface of the street and backfill with 2"-4" of mulch (note: in Tucson, basins must not allow standing water deeper than 8". Excavating deeper and backfilling with mulch allows greater stormwater capacity - the most important thing is that the top of the mulch is at least 2" below the curb cut inlet).
- In areas where the slopes of the basin will exceed 33%, the edges of the basin must be lined with rock to prevent erosion (this is usually necessary where the ROW is less than 9' wide).
- Basins should be no longer than 20' in length, with 5' spacing between successive basins.
- Maximize the area of level bottom within site



constraints to maximize stormwater infiltration.

- In areas with on-street parking, preserve an 18" "step-out zone" of flat (sloped 1% toward basin) soil or gravel next to curb to allow passengers to step in and out of vehicles.
- Preserve a 1' flat (sloped 1% toward basin) area next to pedestrian pathway or sidewalk
- If sidewalks are not present, preserve a minimum 4' flat pedestrian pathway within the ROW (sloped 1% toward basin).
- Curb cut should be both the inlet and the overflow outlet of the basin. To achieve this, the bottom of the curb cut should be at least 4" below any other point along the edge of the basin. This step is imperative to ensure that overflow exits back onto the street and not onto adjacent properties. The more a site is sloped, the shorter the basin must be to maintain these levels.
- Create planting shelves along the basin to support native trees and shrubs. Be sure planting shelves do not block flow of storm-



Typical cross-section of a basin with rock-lined edges, showing typical setbacks for a site on a residential street with on-street parking (for plan view of this practice, see Appendix).

Neighborhood Leaders training



Professional GI training



Maintenance Programs

- “Green Streets Stewards” maintenance crew, training and recognition program
- Pilot program with Northwest Neighborhood
- Partnerships with Tucson Clean and Beautiful, private sector, government



What's next



- Statewide GI demonstrations
- 2012 Tucson GI Conference
- Research
- Outreach and Advocacy

Thank you!

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