

## Altadena Community Garden: Deck Irrigation Recommendations

The proposed landscape design around the Deck presents opportunities to design and install an effective and efficient irrigation that will overcome some of the challenges outlined below while supplying supplemental watering for the plant material to thrive without having a negative impact on the adjacent hardscape and deck. These recommendations will consider the negative impacts that overspray will have on the Deck and the special circumstances of supplying adequate deep watering to the established Avocado and Grapefruit trees.

### Challenges-

- Planter beds less than 5' wide do not lend themselves to effective overhead spray irrigation without also causing substantial overspray onto the deck and adjacent hardscape, which is unacceptable.
- The root zone of the two large trees has been covered or impacted by the deck, hardscape or encroachment of other landscape features such as lawn or garden lots.
- Discovering a Point of Connection (POC) to the existing water main that will supply a minimum of 8 gallons per minute at 40psi.

### Opportunities-

- Inline pressure compensating drip irrigation can deliver low flow deep watering with a very high distribution uniformity while eliminating overspray and run off.
- Planter beds 5' or wider smallest dimension will work very well with overhead spray irrigation.
- Available 110VAC allows for practical hydro zoning according to plant type and exposure with an automatic irrigation controller.

### Design Per Area-

- Deck N1 and N2 – Hydrozone #1
  - The height and natural form of Juncus sp. and its close proximity to the deck precludes the effective use overhead spray irrigation.
  - Small irregular planting spaces between stone pavers precludes the use of drip irrigation.
  - Drip irrigation is recommended with one valve (A1) for the Juncus sp. both N1 and N2
  - Overhead spray irrigation with 5' radius nozzles on 6" pop-up bodies is recommended for the remainder of N1 and N2 combined on one valve (A2).
- West Deck – Hydrozone #2

- The narrow singular strip of grasses combined with the close proximity to the deck and benches precludes overhead spray irrigation.
- Drip irrigation is recommended on one valve (A3)
- South Deck- Hydrozone #3
  - Although the overall smallest dimension of the planter is greater than 5', the location of the three wooden posts present an obstruction that cannot be avoided with overspray spray heads.
  - Drip irrigation is recommended on one valve (A4)
- East Deck Hydrozone #4
  - Drip irrigation is recommended on one valve (A5)
- Avocado and Grapefruit Tree- Hydrozone #5
  - Although access to the root zone is limited, drip irrigation recommended on two valves, one for each tree (A6 and A7) .  
Concentric rings of drip tubing every 12" from drip line to within 2' of trunk.

#### System Specifications-

- Drip irrigation
  - Inline pressure compensating .9GPH emitters spaced every 12" with maximum 12" row spacing. Rainbird XFS
  - Pressure regulating filter factory set at 30PSI. Rainbird RBY
  - Round head 6" galvanized staples secured minimum every 3'
  - Pop up operation indicators installed at the farthest end of the tubing from the valve or at distal ends if the valve is centered in the zone. Rainbird 1806 SAM-PRS with 8VAN Nozzle installed in closed position.
  - Transitions from PVC pipe to inline tubing installed in 6" round valve boxes
  - Tubing buried so top of tube is flush with grade. This can be achieved by creating shallow furrows with a single prong cultivator. Tubing secured with staples covered with mulch.
- Overhead spray irrigation
  - Pressure compensating 6" Pop up heads with check valves. Rainbird 1806 SAM-PRS
  - 5MPR Series Spray Nozzles
- Remote Control Valves and Automatic Controller
  - Rainbird DV series inline plastic valves
  - Weathermatic Smartline 8 station controller with ET based watering (rebates are available)