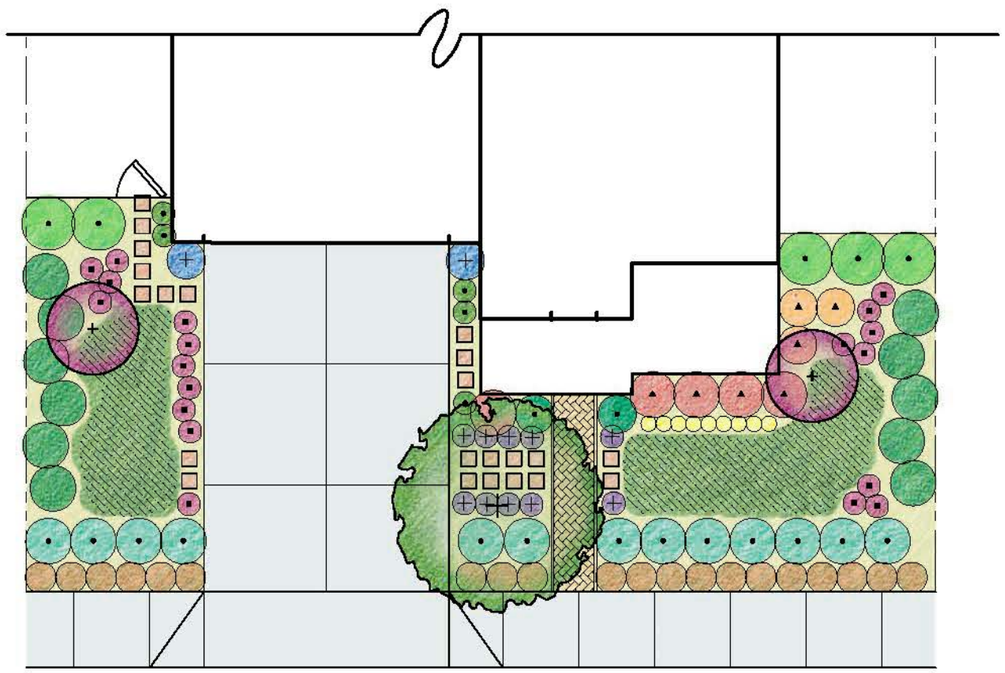
"TYPICAL" SIZED LOT HOUSE
SOUTH FACING FRONT GARDEN, TYPICAL

60'x80' LOT

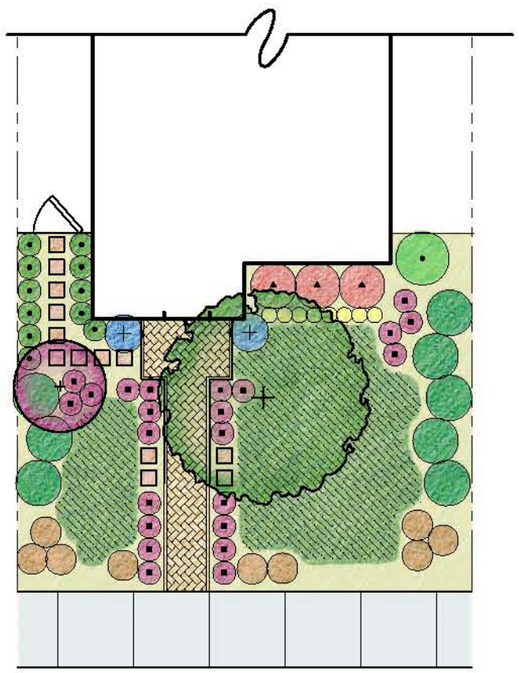


PLANT COUNT

TREES	**3**
SHRUBS	**104**
GROUNDCOVER	**167 SF**

ZERO-LOT LINE HOUSE
SOUTH FACING FRONT GARDEN, TYPICAL

30'x80' LOT



PLANT COUNT

TREES	**2**
SHRUBS	**65**
GROUNDCOVER	**208 SF**

Smart From the Start

SOUTHERN INLAND FRONT YARD

June 2009

SAMPLE PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME
LARGE TREES		
	Jacaranda mimosifolia	Jacaranda
	Prunus 'Krauter Vesuvius'	Flowering Plum
	Quercus suber	Cork Oak
	Schinus molle	Pepper Tree
SMALL TREES		
	Cercis occidentalis	Redbud
	Cotinus coggygria	Smoke Tree
	Fremontodendron 'Dara's Gold'***	Flannel Bush***
LARGE SHRUBS		
	Myrtus communis	Myrtle
	Nerium o. 'Petite Salmon'	Oleander
	Juniperus S. 'Skyrocket'	Juniper Column
	Cistus ladanifer	Crimson-spot Rockrose
	Salvia microphylla	Sage
MEDIUM SHRUBS		
	Berberis repens	Creeping Barberry
	Encephalartos altensteinii	Prickly Cycad
SMALL SHRUBS & PERRENIALS		
	Epilobium californica	California Fuchsia
	Carex 'Frosty Curls'	New Zealand Hair Sedge
	Nandina 'Fire Power'**	Heavenly Bamboo**
	Clarkia rubicunda	Clarkia
	Erigeron glaucas**	Beach Aster**
GROUNDCOVER		
	Arctostaphylos 'Emerald Carpet'	Emerald Carpet
	Cotoneaster dammeri*	Bearberry Cotoneaster*
	Rubus pentalobus*	Bramble*
HARDSCAPE	Pavers	
	Sand-set Brick	
	Mulch	

* Can tolerate light traffic
** Can tolerate shade
*** Provide no bubbler or direct irrigation-Prefers less water

SUNSET ZONES - 20, 21

NORTH

0 5 10 20

1" = 10'-0"

PLANT CLIMATE:
Southern Inland summers are hot and dry with little marine layer influence. Winters are colder than the coast with occasional freeze. Hot dry offshore Santa Ana winds occasionally occur in late fall and early winter.

DESIGN:
The Water Efficient Landscape Ordinance allows drip, drip line, or other low-flow, non-spray irrigation within two feet of any non-permeable surface; it does not allow spray irrigation in these areas. There are no restrictions on the irrigation system if the landscaped area is adjacent to permeable surfacing. Planting and irrigation must be designed appropriately adjacent to non-permeable paving to meet this Ordinance.

PAVING:
Entry and side walkway to be sand-set permeable unit pavers, decomposed granite, pebbles or other surface light in color for low heat emission. Driveway to be permeable concrete, permeable asphalt or upgraded to sand-set permeable paver units. Impervious surface should be minimized.

MULCH:
Two (2) inches of mulch in all areas. Sheet mulching and recycled green waste mulch are recommended.

FIRE:
Templates are based on individual lots within a subdivision. When developing up against wildlands or other fire sensitive areas for an individual parcel or a project, a fire management plan should be created.

DRAINAGE:
Downspouts should be directed into landscape with grading for proper drainage away from house. Runoff during plant establishment must be accomodated on-site.

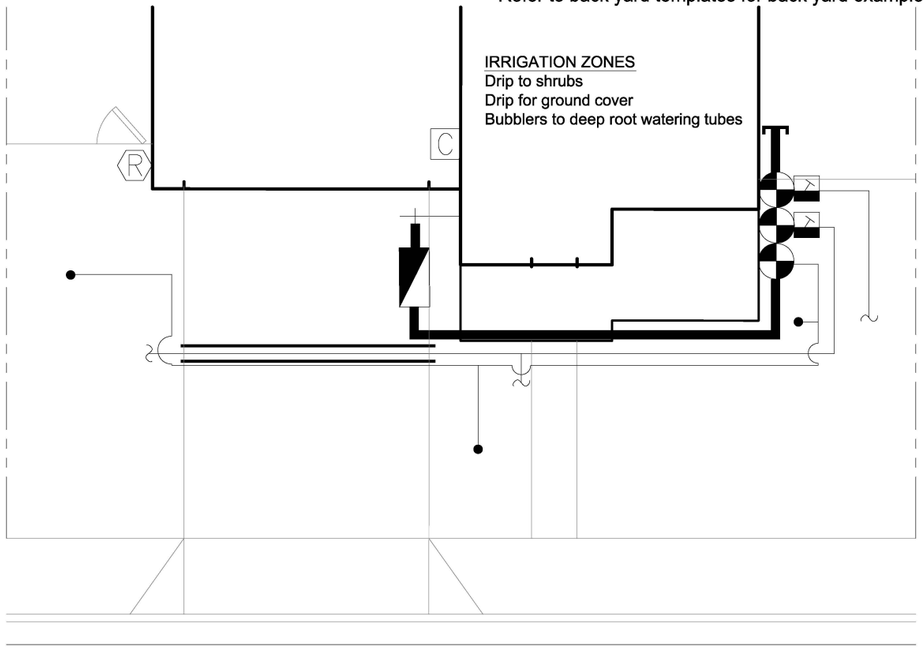
PLANT RESOURCES:
The sample plant legend above provides guidance for appropriate plant selection. Selections should be modified to address different solar orientations, soil conditions, and other micro-climatic factors of a particular building site. Resources for additional plant selections and substitutions include Sunset's Western Garden Book, edited by Kathleen Norris Brenzel; Water Use Classification of Landscape Species (WUCOLS), http://www-facilities.stanford.edu/environment/landscape.pdf and your local chapter of the California Native Plant Society (www.cnps.org).

Note: For additional information regarding design and installation, please see back yard template and CUWCC's Water Smart Landscape Checklist at www.cuwcc.org.

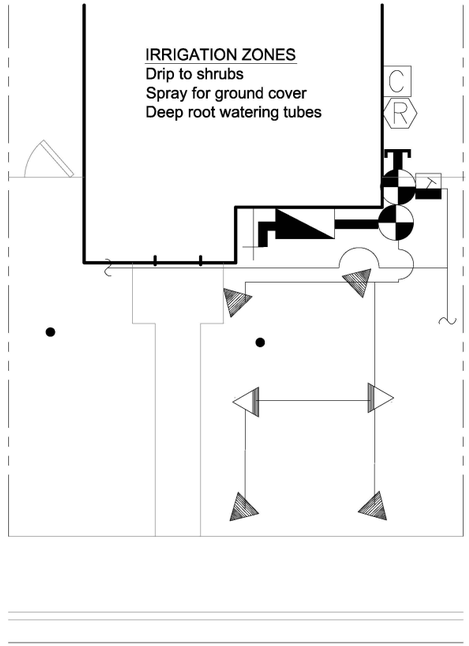
Funded by the U.S. Bureau of Reclamation, Lower Colorado Region, Southern California Office.

"TYPICAL" SIZED LOT HOUSE
SOUTH FACING FRONT GARDEN, TYPICAL
60'x80' LOT

Refer to back yard templates for back yard examples



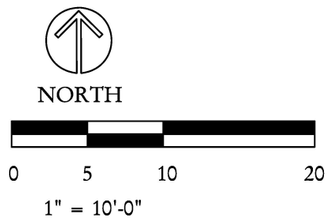
ZERO-LOT LINE HOUSE
SOUTH FACING FRONT GARDEN, TYPICAL
30'x80' LOT



Smart From the Start

SOUTHERN INLAND FRONT YARD

June 2009



SAMPLE WATER USE PROJECTIONS FOR TEMPLATE PLANTING/IRRIGATION

Estimated Water use - Riverside - Zero Lot Line														
Valves	SQ FT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Spray Ground Cover	192	59	62	154	236	321	354	395	384	301	193	113	51	2,623
Drip Ground Cover	373	89	93	232	356	486	534	596	581	455	292	171	77	3,964
TOTAL	565	148	154	386	592	807	888	991	965	756	485	284	129	6,587
Estimated water use 6,587 gal/yr; MAWA = 13,995 gal/yr; projected water use = 47% of MAWA														
Estimated Water use - Riverside - Typical Lot														
Valves	SQ FT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Drip Ground Cover	808	193	201	503	772	1052	1158	1292	1258	985	633	371	168	8,586
TOTAL	808	193	201	503	772	1052	1158	1292	1258	985	633	371	168	8,586
Estimated water use 8,586 gal/yr; MAWA = 20,015 gal/yr; projected water use = 43% of MAWA														
Rainwater potential for 980 sq ft roof = 4753 gal/yr														
Greywater Potential for 2 showers/day = 17,800 gal/yr														

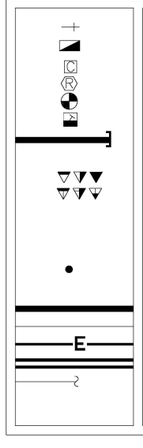
PRECIP = Precipitation Rate is the application rate of irrigation in inches per hour
Assumed precips: Spray heads -1.8, Drip -.4, Subsurface drip - 1.1, Deep root watering -8
MAWA = Maximum Annual Water Allotment (in gallons and based upon 70% of area historical annual ET)
ETo = Reference evapotranspiration is the quantity of water evaporated from the soil and transpired by the planting and is measured in inches per month
ANN GAL = Annual gallons
RUNTIME = Total amount of minutes required for planting root depth in native soil
CYC = Total number of repeat cycles required for native soil
CYC TIME = Rounded minutes of each cycle to be repeated by "CYC allowing infiltration monthly number = number of times/month to apply runtime (refer to example below)
SPRAY HEAD = Spray head with one of the following: standard matched precipitation spray nozzles - 1.8"/hr, low precipitation nozzles - 1"/hr, or mini rotor nozzles - .4"/hr
During establishment period, root depth is shallower, thus requiring more frequent irrigation with shorter run times, stretching out the frequency and extending the total runtimes as the planting matures and roots penetrate into native soil conditions over a 3-5 year span. Establishment irrigation frequency depends upon the time of year initial planting takes place.
BASE SCHEDULE for established plant material with historical weather data (10 year average) and assumed precips. Note, if low precipitation heads or mini rotors are used in lieu of conventional spray heads, then the base run times will need to be extended to provide water down to the planting root zones.

Monthly example:
The number under the month indicates the number of times that zone needs to be irrigated during that month. For fractions of runtimes per month, multiply the # of CYC by the decimal (example: drip/ground cover requires .6 runtimes per month of March = .6 X 7(# of CYC)= 4 cycles of 23 minutes each (CYC). This would equate to 92 minutes total runtime one time during the month of March.
Front Yards: Refer to front yard design templates for layout ideas.
Note: Some plants respond better to overhead spray while many others do better with drip. The irrigation design will need not only to take into consideration plant preferences, but also runoff and potential blockage where the planting grows in front of the spray heads. Drip and spray are both shown on the templates to show differences in system costs and projected water use. Also see back yard templates.

SAMPLE BASE SCHEDULES FOR ESTABLISHED LOW WATER USING PLANT MATERIAL

Riverside base schedules (Riverside county)															
STA	Precip	RUN TIME	CYC	CYC TIME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Spray Ground Cover	1.8	42	4	12	0	0	1.0	1.6	2.1	2.4	2.6	2.6	2.0	1.3	1	0
Drip Shrub	0.4	233	4	53	0	0	0.6	1.0	1.3	1.5	1.7	1.6	1.3	0.8	0	0
Subsurface Drip - Ground Cover	1.1	53	3	19	0	0	1.0	1.6	2.1	2.4	2.6	2.6	2.0	1.3	1	0
Drip Ground Cover	0.4	146	3	53	0	0	1.0	1.6	2.1	2.4	2.6	2.6	2.0	1.3	1	0
Deep root watering-Trees in planting	8	31	12	3	0	0	0.3	0.4	0.5	0.6	0.7	0.6	0.5	0.3	0	0

IRRIGATION SYSTEM LEGEND



1" Shut-off valve-domestic supply	-By other section of contract-providing 12 gpm at 55 psi min.	
Irrigation backflow prevention device-1"	-12" Above grade to protect domestic supply	
Irrigation controller	-Smart technology indoor or exterior mount	
Rain sensor	-Adjustable rain shut-off device with unobstructed installation	
Remote Control Valves	-Below grade in valve box with 2 cu feet of gravel below	
Drip control assembly	-120 Mesh filter and 40 psi regulator where psi is excessive	
Irrigation main stub-out-1"	-Provide all spare station wires and common in valve box	
12" Spray heads (24" from walks)	-Matched precip with check valves-10H,T,Q	-10' radius
12" Spray heads (24" from walks)	-Matched precip with check valves-8H,T,Q	-8' radius

NOTE: 6" Spray head body is to be used where mature plant material is less than 5" height.
All spray heads to be installed 24" from hardscape and 12" from permeable surfaces and fences.

Deep root watering tube	-Use 1 GPM bubbler as alternate to hand watering	
Irrigation main-1"	-1120/Schedule 40 PVC pipe	-18" Cover
Irrigation lateral	-1120/Class 200 PVC pipe	-12" Cover
Electrical conduit-1"	-1120/Schedule 40 PVC pipe	-24" Cover
Sleeving-3"	-1120/Schedule 40 PVC pipe	-24" Cover
To drip irrigation	-Point source or multi-outlet emitters	- 6" Cover