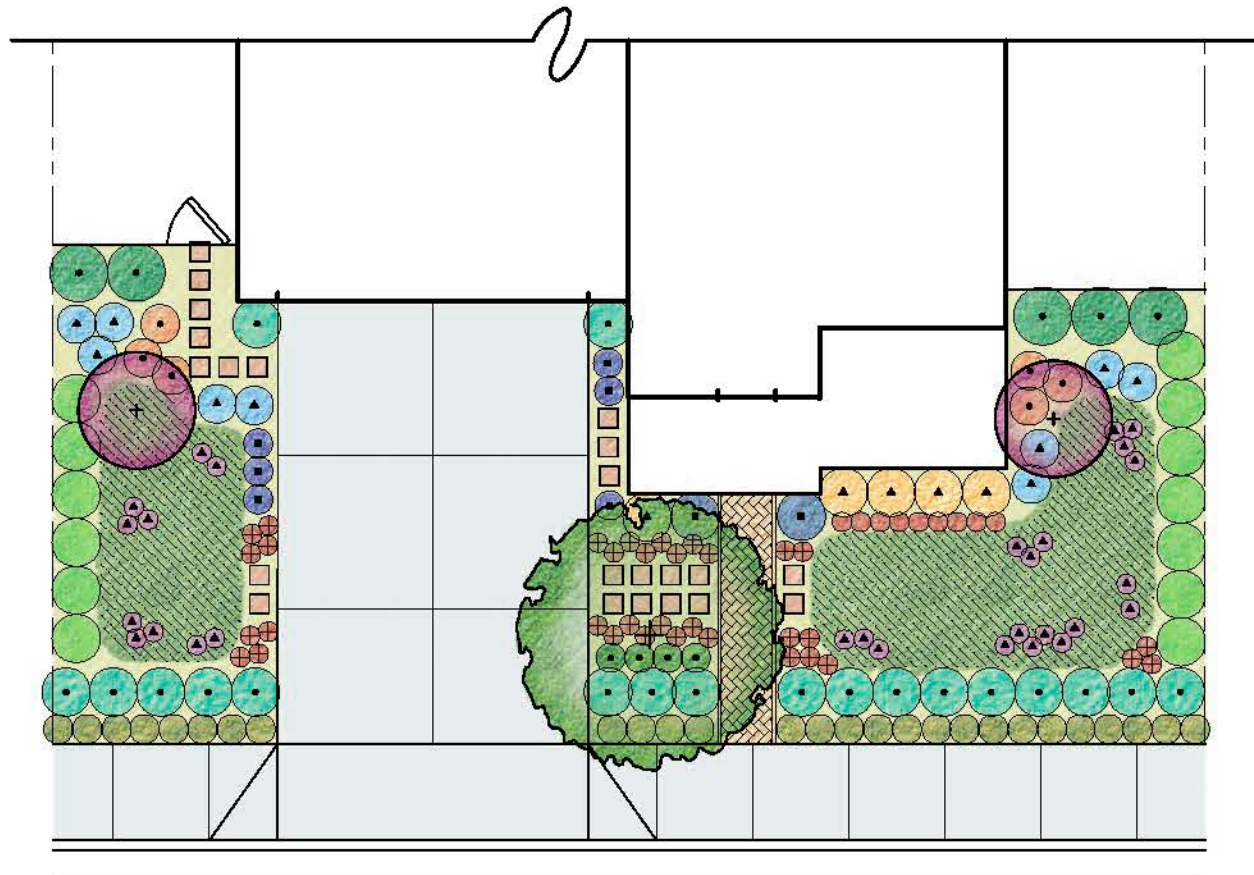


"TYPICAL" SIZED LOT HOUSE
SOUTH FACING FRONT GARDEN, TYPICAL

60'x80' LOT



PLANT COUNT	
TREES	3
SHRUBS	167
GROUNDCOVER	250 SF

PLANT CLIMATE:

Southern Coastal summers are warm and dry with overnight marine layer influence. Winters are typically mild with the exception of occasional strong hot dry offshore Santa Ana winds 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:

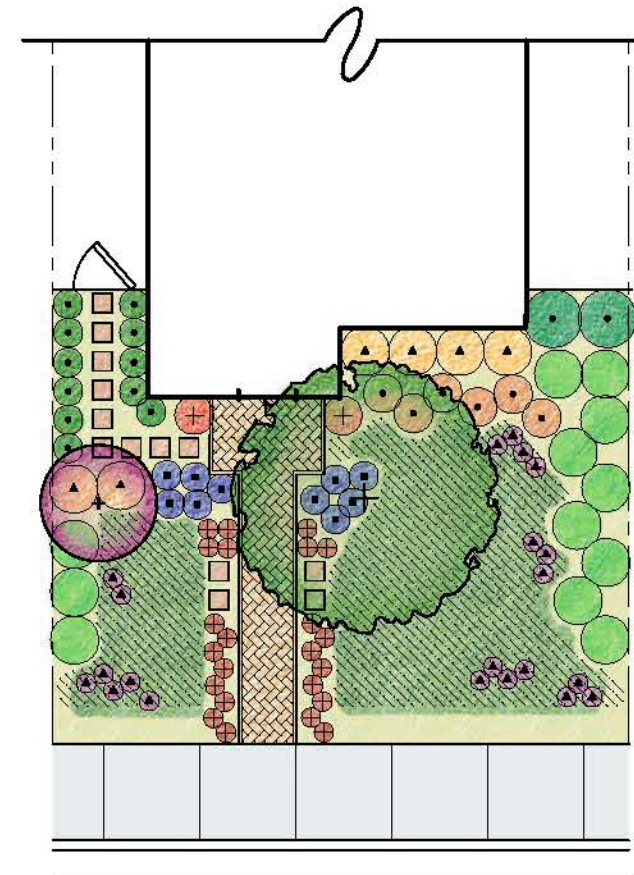
Two (2) inches of mulch in all areas. Sheet mulching and recycled green waste mulch are recommended.

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.

ZERO-LOT LINE HOUSE
SOUTH FACING FRONT GARDEN, TYPICAL

30'x80' LOT



PLANT COUNT	
TREES	2
SHRUBS	93
GROUNDCOVER	250 SF

DRAINAGE:

Downspouts should be directed into landscape with grading for proper drainage away from house. Runoff during plant establishment must be accommodated 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 Branzel; 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).

SOUTHERN COASTAL FRONT YARD

June 2009

SAMPLE PLANT LEGEND

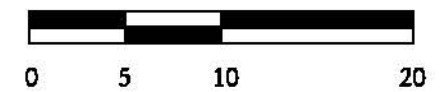
SYMBOL	BOTANICAL NAME	COMMON NAME
LARGE TREES		
	<i>Leptospermum laevigatum</i> <i>Quercus tomentella</i>	Australian Tea Tree Island Oak
SMALL TREES		
	<i>Aloe barberae</i> <i>Arbutus unedo</i> 'Elfin King' <i>Dracaena draco</i>	Tree Aloe Dwarf Strawberry Tree Dragon Tree
LARGE SHRUBS		
	<i>Protea obtusifolia</i> <i>Carpenteria californica</i> <i>Phormium</i> 'Bronze Baby' <i>Echium candicans</i> <i>Helianthemum nonnularium</i> <i>Encephalartos altensteinii</i>	Limestone Sugarbush Anemone Phormium Pride of Madelra Sunrose Prickly Cycad
MEDIUM SHRUBS		
	<i>Agave a. 'Nova'</i> <i>Ribes viburnifolium</i> **	Blue Fox Tail Agave Catalina Currant**
SMALL SHRUBS & PERRENIALS		
	<i>Heuchera maxima</i> ** <i>Carex pansa</i> <i>Agave dasylirioides</i> <i>Euphorbia dulcis</i> ** <i>Dudleya brittonii</i>	Island Alum Root** Sedge Dasylirion Agave NCN Dudleya
GROUNDCOVER		
	<i>Arctostaphylos</i> 'Emerald Carpet' <i>Dudleya haesel</i> <i>Dymondia margaritae</i> * <i>Senecio mandraliscae</i>	Emerald Carpet Catalina Island Live-Forever Silver Carpet* NCN
HARDSCAPE		
	Pavers	
	Sand-set Brick	
	Mulch	

* Can tolerate light traffic
* Can tolerate shade

SUNSET ZONES - 22, 23, 24



NORTH

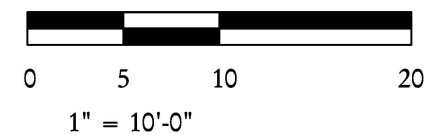


1" = 10'-0"



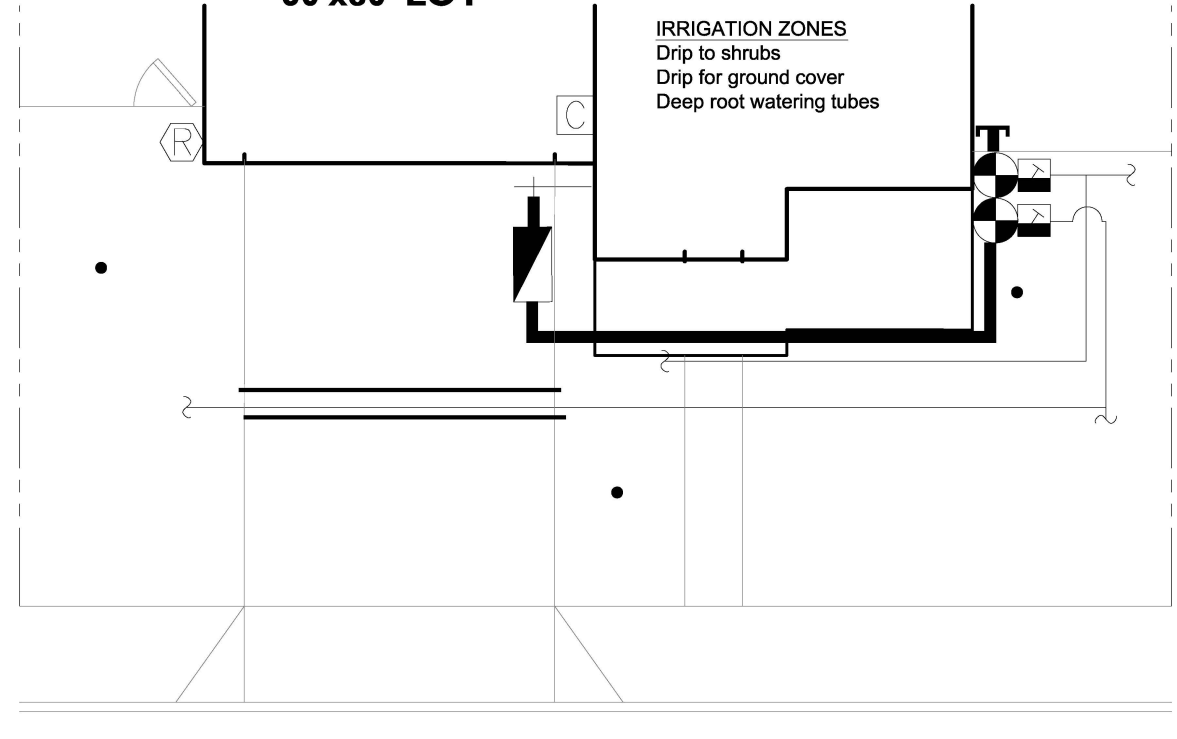
SOUTHERN COASTAL FRONT YARD

June 2009



"TYPICAL" SIZED LOT HOUSE

SOUTH FACING FRONT GARDEN, TYPICAL
60'x80' LOT

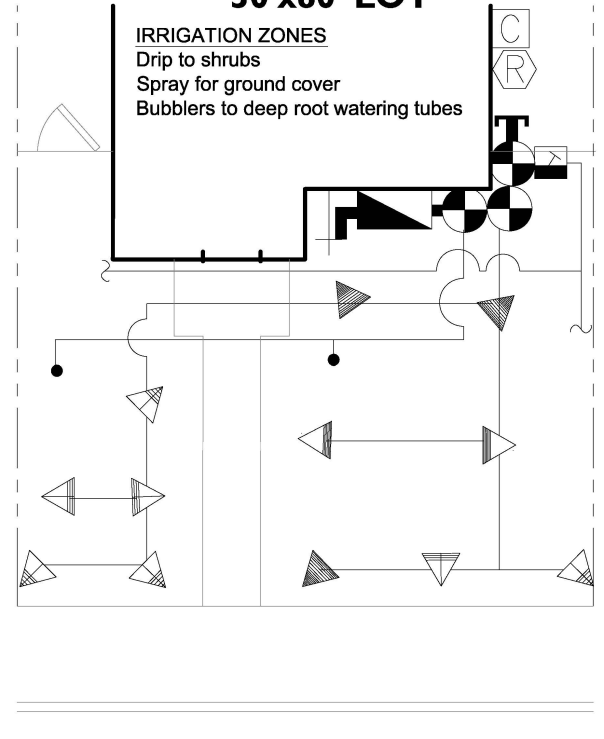


IRRIGATION ZONES
Drip to shrubs
Drip for ground cover
Deep root watering tubes

Refer to back yard templates for back yard examples

ZERO-LOT LINE HOUSE

SOUTH FACING FRONT GARDEN, TYPICAL
30'x80' LOT



IRRIGATION ZONES
Drip to shrubs
Spray for ground cover
Bubblers to deep root watering tubes

SAMPLE WATER USE PROJECTIONS FOR TEMPLATE PLANTING/IRRIGATION

Estimated Water Use-Santa Barbara - Zero Lot Line														
Valves	SQ FT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Spray Ground Cover	265	2	56	134	219	354	361	361	361	318	235	93	26	2,521
Drip Ground Cover	300	2	49	118	193	312	318	318	318	280	207	82	23	2,220
TOTAL	565	4	105	253	412	665	679	679	679	599	442	176	49	4,741
Estimated water use 4,741 gal/yr; MAWA = 10,004 gal/yr; projected water use = 47% of MAWA														
Estimated Water Use-Santa Barbara - Typical Lot														
Valves	SQ FT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Drip Ground Cover	808	5	133	319	520	839	856	856	856	755	557	221	62	5,979
TOTAL	808	5	133	319	520	839	856	856	856	755	557	221	62	5,979
Estimated water use 5,979 gal/yr; MAWA = 14,306 gal/yr; projected water use = 42% of MAWA														
Rainwater potential for 980 sq ft roof = 9,739 gal/yr														
Greywater Potential for 2 showers/day = 17,800 gal/yr														

SAMPLE BASE SCHEDULES FOR ESTABLISHED LOW WATER USING PLANT MATERIAL

Santa Barbara Schedule (Santa Barbara 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	0.7	1.1	1.7	1.7	1.7	1.7	1.5	1.1	0	0
Drip Shrub	0.4	233	4	53	0	0	0.4	0.7	1.1	1.1	1.1	1.1	1	0.7	0	0
Subsurface Drip - Ground Cover	1.1	53	3	19	0	0	0.7	1.1	1.7	1.7	1.7	1.7	1.5	1.1	0	0
Drip Ground Cover	0.4	146	3	53	0	0	0.7	1.1	1.7	1.7	1.7	1.7	1.5	1.1	0	0
Deep root watering-Trees in planting	8	31	12	3	0	0	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0	0

PRECIP = Precipitation Rate is the application rate of irrigation in inches per hour
 Assumed precip: 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)
 ET_o = 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 precip. 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.

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