

SOUTHERN FOOTHILLS BACK YARD

June 2009

SAMPLE PLANT LEGEND

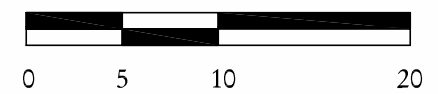
SYMBOL	BOTANICAL NAME	COMMON NAME
LARGE TREES		
	<i>Geijera parviflora</i>	Australian Willow
	<i>Quercus agrifolia</i>	Live Oak
SMALL TREES		
	<i>Arbutus Unedo</i>	Strawberry Tree
	<i>Cercis occidentalis</i>	Redbud
	<i>Laurus nobilis**</i>	Sweet Bay**
LARGE SHRUBS		
	<i>Carpenteria californica</i>	Anemone
	<i>Arctostaphylos D. 'Howard McMinn'</i>	Manzanita
	<i>Coprosma 'Coppershine**'</i>	NCN
	<i>Cistus Salvifolious</i>	Sage-leaf Rockrose
SMALL SHRUBS & PERRENIALS		
	<i>Nandina 'Fire Power**'</i>	Heavenly Bamboo**
	<i>Festuca 'Siskiyou Blue'</i>	Blue Fescue
	<i>Mimulus aurantiacus</i>	Monkey Flower
	<i>Heuchera 'Santa Ana Cardinal**'</i>	Santa Ana Cardinal Coral Bells
	<i>Gaura lindheimeri</i>	Gaura
GROUNDCOVER RECREATIONAL/ACTIVE		
	<i>Carex texensis*</i>	Sedge*
	Turf *	NCN*
GROUNDCOVER SOCIAL/PASSIVE		
	<i>Acacia redolens 'Desert Carpet'</i>	Dwarf Prostrate Acacia
	<i>Achillea millefolium</i>	Common Yarrow
	<i>Arctostaphylos 'Emerald Carpet'</i>	Emerald Carpet
HARDSCAPE		
	Pavers	Mulch or DG
	Stepping Stones	Pea Gravel
	Bench	Sand-set Brick

* Can tolerate light traffic
** Can tolerate shade

SUNSET ZONES - 18, 19



NORTH



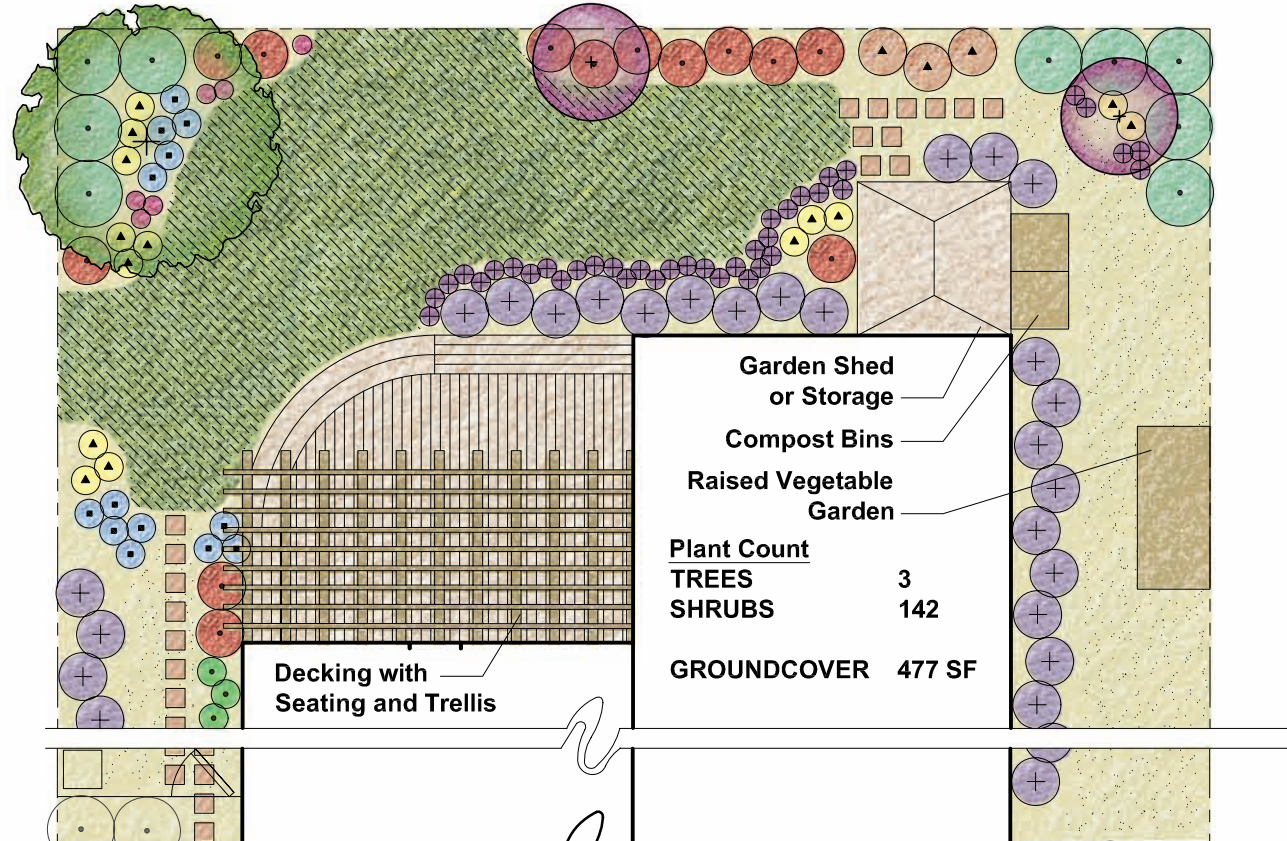
1" = 10'-0"

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 NORTH FACING REAR GARDEN, TYPICAL

60'x80' LOT

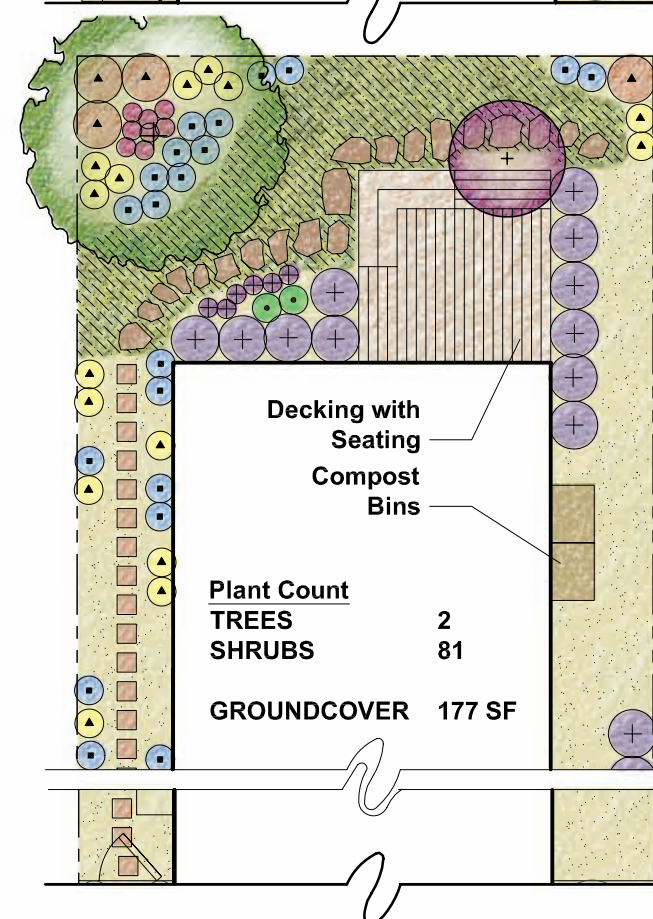
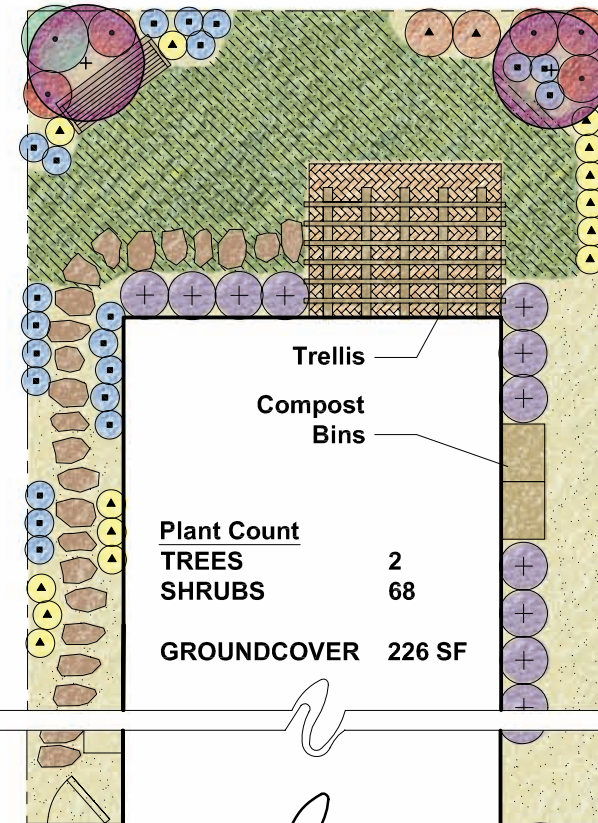
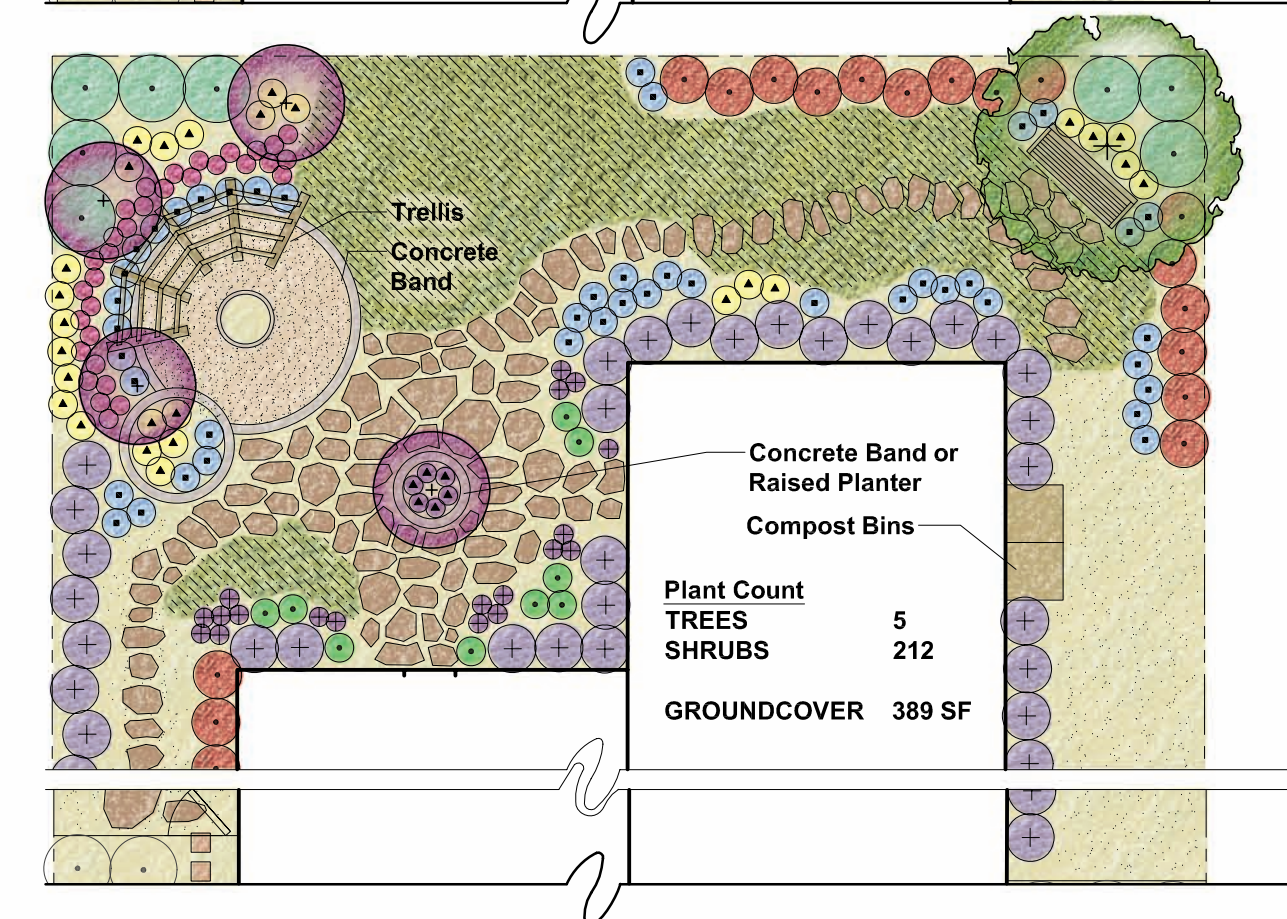
RECREATION/ACTIVE



ZERO-LOT LINE HOUSE NORTH FACING REAR GARDEN, TYPICAL

30'x80' LOT

SOCIAL/PASSIVE



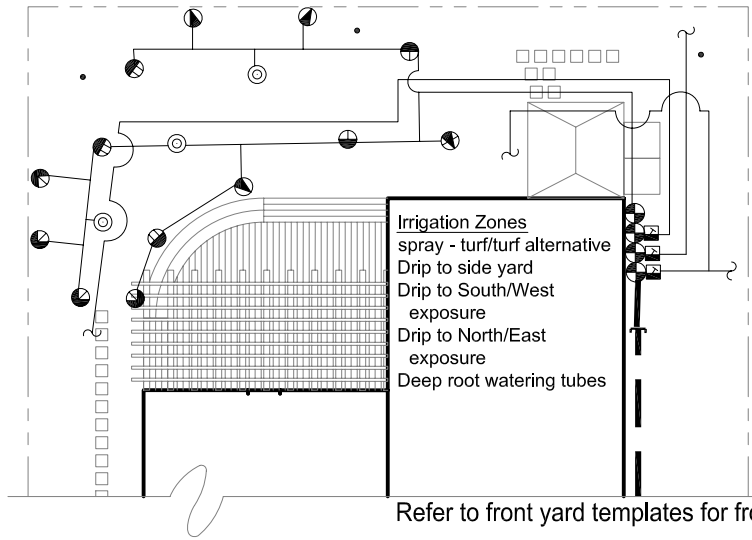


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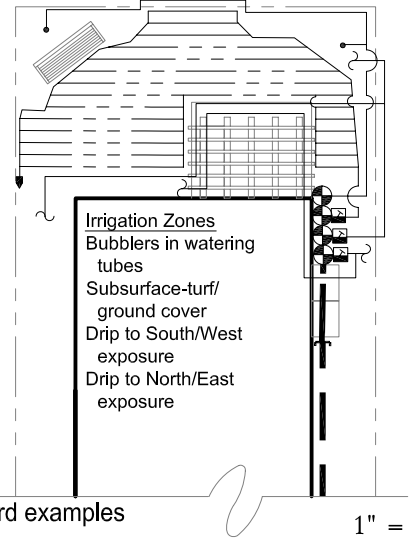
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RECREATION/ACTIVE

"TYPICAL" SIZED LOT HOUSE NORTH FACING REAR GARDEN, TYPICAL



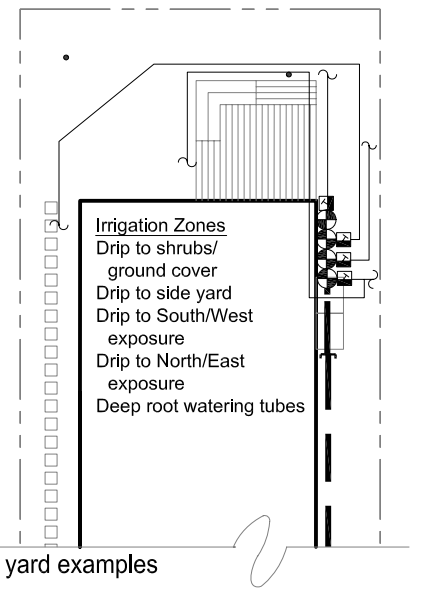
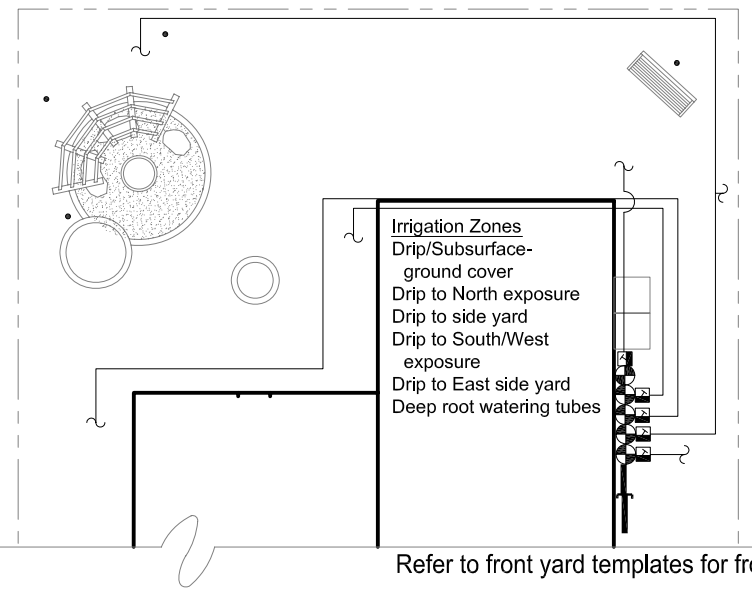
ZERO-LOT LINE HOUSE NORTH FACING REAR GARDEN, TYPICAL



Refer to front yard templates for front yard examples

1" = 16'-0"

SOCIAL/PASSIVE



Refer to front yard templates for front yard examples

	Existing irrigation main stub-out-1"	-Connect to stubout, station wires and common in valve box	
	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	
	Flush valve/air relief valve	-Manual ball valve and air relief valve as required	
	6" Spray heads (12" from fence)	-Matched precip with check valves-12H,T,Q,ADJ	-12' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-10H,T,Q	-10' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-8F,H,T,Q	-8' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-15SST,EST	-3' X 10'
	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
	Inline subsurface drip-1/2"	-LDPE with inline emitters 12" on center	-4" cover

Typical Lot - Recreation	Estimated Water Use-Porterville	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Spray Turf	480	39	191	775	1,226	1,914	2,249	2,542	2,183	1,585	954	215	0	13,872
Spray Turf alternative	480	22	109	443	701	1,094	1,285	1,452	1,247	906	545	123	0	7,927
Drip GC	1120	30	149	602	954	1,489	1,749	1,977	1,698	1,233	742	167	0	10,790
TOTAL with Turf	1600	69	340	1,377	2,180	3,402	3,998	4,519	3,881	2,818	1,696	383	0	24,662
TOTAL with Turf alternative	1600	52	258	1,045	1,654	2,582	3,034	3,429	2,945	2,138	1,287	290	0	18,717

Estimated water use with turf 24,662 gal/yr; MAWA = 35,307 gal/yr; projected water use = 70% of MAWA with turf
 Estimated water use with turf alternative 18,717 gal/yr; MAWA = 35,307 gal/yr; projected water use = 53% of MAWA with turf alternative

Zero Lot - Recreation	Estimated Water Use-Porterville	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Subsurface - Turf	255	16	79	320	507	791	929	1,050	902	655	394	89	0	5,732
Subsurface - Turf alternative	255	9	45	183	289	452	531	600	515	374	225	51	0	3,275
Drip shrubs	465	13	62	250	396	618	726	821	705	512	308	70	0	4,480
TOTAL with Turf	720	29	141	570	903	1,409	1,655	1,871	1,607	1,167	702	158	0	10,212
TOTAL with Turf alternative	720	22	107	433	685	1,070	1,257	1,421	1,220	886	533	120	0	7,755

Estimated water use with turf 10,212 gal/yr; MAWA = 15,888 gal/yr; projected water use = 64% of MAWA with turf
 Estimated water use with turf alternative 7,755 gal/yr; MAWA = 15,888 gal/yr; projected water use = 49% of MAWA with turf alternative

Typical Lot -Social	Estimated Water Use-Porterville	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip Ground Cover	805	22	107	433	685	1,070	1,257	1,421	1,220	886	533	120	0	7,755
Drip shrubs	795	21	106	428	677	1,057	1,242	1,403	1,205	875	527	119	0	7,659
TOTAL	1600	43	213	861	1362	2127	2499	2824	2426	1761	1060	239	0	15,414

Estimated water use 15,414 gal/yr; MAWA = 35,307 gal/yr; projected water use = 43% of MAWA

Zero Lot - Social	Estimated Water Use-Porterville	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip shrubs	720	19	96	387	613	957	1,124	1,271	1,091	792	477	108	0	6,936
TOTAL	720	19	96	387	613	957	1,124	1,271	1,091	792	477	108	0	6,936

Estimated water use 6,936 gal/yr; MAWA = 15,888 gal/yr; projected water use = 44 % of MAWA

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)
 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.
 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-0.4"/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.
 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.
 Backyards: Refer to backyard design templates for both social and recreation 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 front yard templates.