IRRIGATION EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	MANUF	MODEL	SIZE	NOTES
M	Water Meter			3/4"	Irrigation Water Meter provided by others. Location shown is approximate. Verify in field.
	Point of Connection at Existing House Water Service Line			Size Per Plan	Note: Existing service line must be 3/4" minimum for use by control valve.
	Anti-Siphon Control Valve	Rain Bird	ASVF	Size Per Plan	Install per detail J.
	Low Flow Control Zone Kit	Rain Bird	XACZ-075-PRF	3/4"	Kit shall include psi regulator, filter and ball valve. Install per Detail K.
	Ball Valve	KBI	WLT-0000-T	Line Size	See Detail F. Install in 10" round valve box.
C	'Smart' Controller	Hunter	Pro-C Contoller PC1500I-Solar Sync	15 Stations	Interior wall-mount controller. Install in a plastic enclosure. See Detail L. Install with Hunter Solar Sync. Final location of controller shall be selected by Owner. Install per manufacture's specifications.
E	Electrical Connection			120 Volt	Plug or hard wire controller onto GFI electrical outlet. Location to be determined by Owner.
S	Solar Sync	Hunter			Mount Solar Sync in an area that will be exposed to unobstructed rainfall, but not in the path of sprinkler spray. See Detail I. Final location of Solar Sync shall be selected by Owner. Install per manufacture's specifications.
	Pressurized Mainline	PVC	Sch.40 1-1/2" or less Cl. 315 2" or more	Size Per Plan	Install at 18" depth. See Trenching Detail H.
	Non-pressurized Lateral	PVC	Class 200	Size Per Plan	Install at 12" depth. See Trenching Detail H.
NOT SHOWN	Pressure Reducing Valve	Wilkins	500 Series	Mainline Size	Install on mainline in 10" round valve box at point-of-connection if psi is found to exceed 80 psi. See Ball Valve Detail (Similar).
	Automatic Line Flushing Valve	Netafim	TL050MFV-1	1"	Install in 6" round valve box with 12" deep gravel sump. See Ball Valve Detail (Similar).
NOT SHOWN	Air/Vacuum Relief Valve	Netafim	TLAVRV	1"	Install at highest point on circuit. See manufacture's details. Install in 6" round valve box.
	Dripper Line (Techline Dripperline)	Netafim	TLDL6-18xx	1/2"	Install per manufacture specifications. Space dripper lines at 12" O.C. Stake in place at 10 feet O.C. with jute stakes. Mulch over tubing in planters (3" deep).
	Sleeve	PVC	See Notes	Size Per Plan	**Sleeve under Improvements:** Under Vehicle Paving install mainline, wiring and laterals in separate PVC Sch. 80 sleeves with 30" cover. Under Pedestrian Paving install mainline, wiring and laterals in separate PVC Sch. 40 sleeves with 24" cover. All sleeves shall be 2-1/2" times line size. See Sleeve Detail E.
	Controller Station Maximum GPM Valve Size				

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUF	MODEL	PSI	RADIUS	GPM	NOTES
	Shrub Pop-up Spray	**Toro**	**570Z-12P-PRX-COM**				**Body Style**
	Precision Series Spray Nozzle - Quarter		O-T-5-Q	30	5'	0.06	Install on 12" pop-up bodies. Use bottom inlet only. See Pop-up Detail G.
	Precision Series Spray Nozzle - Half		O-T-5-H	30	5'	0.09	
	Precision Series Spray Nozzle - One Third		O-T-5-T	30	5'	0.13	
	Precision Series Spray Nozzle - Quarter		O-T-8-Q	30	8'	0.17	
	Precision Series Spray Nozzle - Half		O-T-8-H	30	8'	0.22	
	Precision Series Spray Nozzle - One Third		O-T-8-T	30	8'	0.33	
	Shrub Stream/Bubbler	**Rain Bird**	**1806-SAM-PRS-PA80**				**Body Style**
	Tree Bubbler		RWS-S-B-1401	30		(2x) 0.25	Install PCS screens where required to reduce radius. Install all shrub/stream bubblers on 1806-SAM pop-up bodies with PA-80 adapter. See Pop-up Detail G. Install (2) RWS Root Watering Systems per tree.
	Quarter Circle MPR Stream Bubbler		5H-B with PCS-020	30	2'	0.2	
	Half Circle MPR Stream Bubbler		5Q-B with PCS-040	30	2'	0.4	
	MP Rotator	**Hunter**	**Institutional Spray**				**Body Style**
	MP Rotator Nozzle - Quarter		INST-12-CV-MP1000-90	30	8' to12'	0.19	Install on 12" pop-up bodies. Use bottom inlet only. See Pop-up Detail G.
	MP Rotator Nozzle - Half		INST-12-CV-MP1000-180	30	8' to12'	0.37	
	MP Rotator Nozzle - Full		INST-12-CV-MP1000-360	30	8' to12'	0.75	

NOTE: ALL SPRAY HEADS ARE TO BE EQUIPPED WITH BUILT-IN CHECK VALVES. ALL HEADS ARE TO BE ADJUSTED TO PROVIDE BEST COVERAGE TO THE LANDSCAPED AREA WITHOUT OVER SPRAY ONTO BUILDINGS, WALLS, WALKWAYS AND PAVING.

IRRIGATION SUPPLIER NOTE:

MOST OF THE IRRIGATION EQUIPMENT CAN BE FOUND AT THE FOLLOWING SUPPLIERS:

- HYDROSCAPE PRODUCTS
- EWING IRRIGATION
- GRANGETTO'S FARM & GARDEN SUPPLY
- IMPERIAL IRRIGATION SUPPLY

PRESSURE CALCULATIONS

PROJECT: COOP. COMM.
LOCATION:
PRESS ZONE / SOURCE ELEV.:
DATE OF PRESSURE CHECK: BY:
JOB NO.:
CLIENT NO.:
WATER AUTHORITY:
CALC. DATE: 4/30/10 BY: MS

VALVE NO. CHECKED: 2
PRESS. AT POC: ASSUME 80 PSI
POC ELEVATION: HIGHEST HEAD:

PIPE SECTION	PIPE TYPE	PIPE SIZE	PIPE LENGTH	ACCUM. GPM	LOSS IN PSI
1	CL.200	3/4"	10'	0.56	0.02
2	CL.200	3/4"	10'	0.93	0.02
3	CL.200	3/4"	10'	1.86	0.02
4	CL.200	3/4"	5'	2.79	0.04
5	CL.200	3/4"	10'	4.0	0.08
A. TOTAL LATERAL SYSTEM LOSSES					0.18
MAINLINE SYSTEM:					
PIPE SECTION	PIPE TYPE	PIPE SIZE	PIPE LENGTH	ACCUM. GPM	LOSS IN PSI
1	SCH. 40	1-1/4"	115'	4	0.5
B. TOTAL MAINLINE SYSTEM LOSSES					0.5
MISCELLANEOUS LOSSES:			**SIZE:**		
WATER METER			3/4"		0.7
CONTROL VALVE			3/4"		3.8
C. TOTAL MISCELLANEOUS LOSSES					4.5
D. TOTAL SYSTEM LOSSES (A+B+C)					5.18
E. FITTING LOSSES (15% OF TOTAL LOSSES)					0.8
F. HEAD LOSS / GAIN IN SYSTEM					
G. MINIMUM REQUIRED PRESSURE AT LAST HEAD					30
H. DESIGN PRESSURE (D+E+F+G)					35.98
I. AVAILABLE PSI					80
J. RESIDUAL PSI (I-H)					44.02
K. PUMP BOOST					
L. ADJUSTED RESIDUAL PSI (J+K)					44.02

NOTE: IF THE RESIDUAL PSI IS MORE THEN 10% OF THE AVAILABLE PSI THE IRRIGATION SYSTEM SHOULD PERFORM CORRECTLY.

WATERING SCHEDULE
IRRIGATION CONTROLLER RUN TIMES (WHILE PLANTS ARE ESTABLISHING)

Irrigation Hydrozone 1 | Low Water Use | Loam | Drip | 2.0 Gal/Hour

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum Minutes per start time	11	11	11	11	11	11	11	11	11	11	11	11
Start times per week*	2	2	3	4	5	6	6	6	4	3	2	2
Total minutes per week	22	22	33	44	55	66	66	66	44	33	22	22

Irrigation Hydrozone 2 | Low Water Use | Loam | Gear Rotor | 0.39 Inches/Hour

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum Minutes per start time	27	27	27	27	27	27	27	27	27	27	27	27
Start times per week*	1	2	2	3	3	4	4	4	3	2	2	1
Total minutes per week	27	54	54	81	81	108	108	108	81	54	54	27

Irrigation Hydrozone 3 | Low Water Use | Loam | Sprinkler | 1.00 Inches/Hour

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum Minutes per start time	11	11	11	11	11	11	11	11	11	11	11	11
Start times per week*	1	2	2	3	3	4	4	4	3	2	2	1
Total minutes per week	11	22	22	33	33	44	44	44	33	22	22	11

Irrigation Hydrozone 4 | Low Water Use | Loam | Bubbler | 1.0 Gal/Min

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum Minutes per start time	2	2	2	2	2	2	2	2	2	2	2	2
Start times per week*	2	2	3	4	5	6	6	6	4	3	2	2
Total minutes per week	4	4	6	8	10	12	12	12	8	6	4	4

*Start times per week may not equal days per week. Multiple start times per day may be needed to avoid runoff, and comply with current water emergency restrictions.

NOTES:

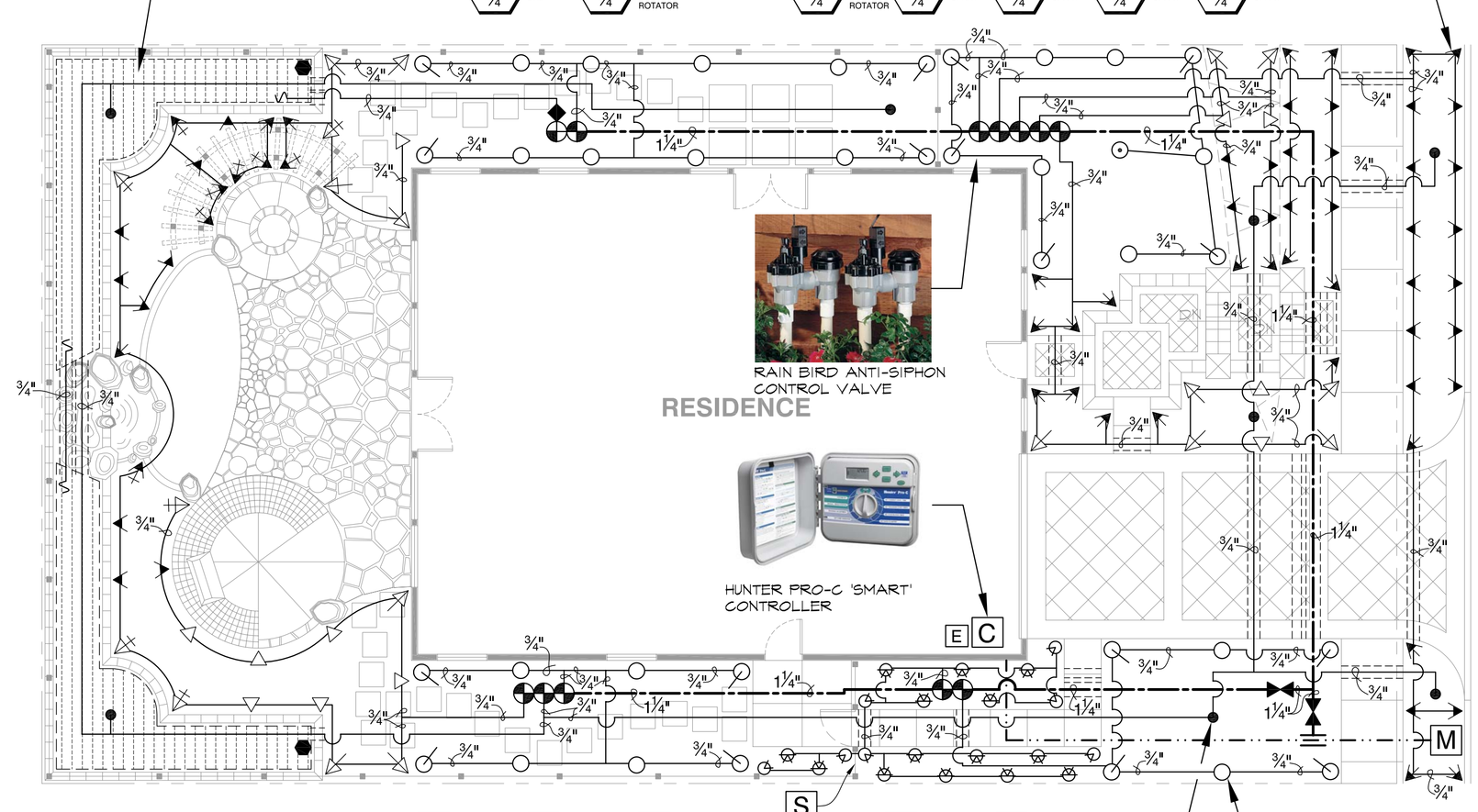
1. This Irrigation Schedule was created by using the City of San Diego Landscape Watering Calculator available on the City of San Diego Official Web site (www.sandiego.gov)

2. See Sheet L-1 for Irrigation Hydrozone Map.

3. After all the plant material is established (approx. 1-2 years from planting) the watering times could be reduced. This decision shall be made by the individual homeowner.

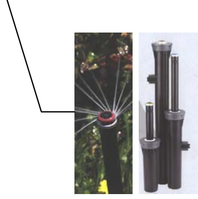
NETAFIM DRIP IRRIGATION SYSTEM

TORO PRECISION SERIES SPRAY NOZZLES



HUNTER SOLAR SYNC

RAIN BIRD RWS TREE ROOT WATERING SYSTEM



HUNTER MP ROTATOR NOZZLES

0 4' 8' 16'
SCALE: 1/8"=1'-0"

North

SEE SHEET L-5 FOR IRRIGATION DETAILS

REVISIONS	BY

TESHIMA DESIGN GROUP
LANDSCAPE ARCHITECTURE • LAND PLANNING
9903 BUSINESSPARK AVE. SUITE 100 • SAN DIEGO, CA 92131
PH: (858) 693-8824 FAX: (858) 693-1182

IRRIGATION PLAN

DESIGN FOR EMPTY NESTER/ENTERTAINER

TYPICAL RESIDENTIAL PLOT

Date:	4-30-10
Scale:	AS SHOWN
Drawn:	MS
Job:	COOP. COMM.
Sheet	L-4

of 5 Sheets