

PLANTING PLAN, NOTES,
AND LEGEND | -5A

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BID SET SUBMITTAL

CITY OF ALAMEDA
CALIFORNIA
ENGINEERING DEPARTMENT

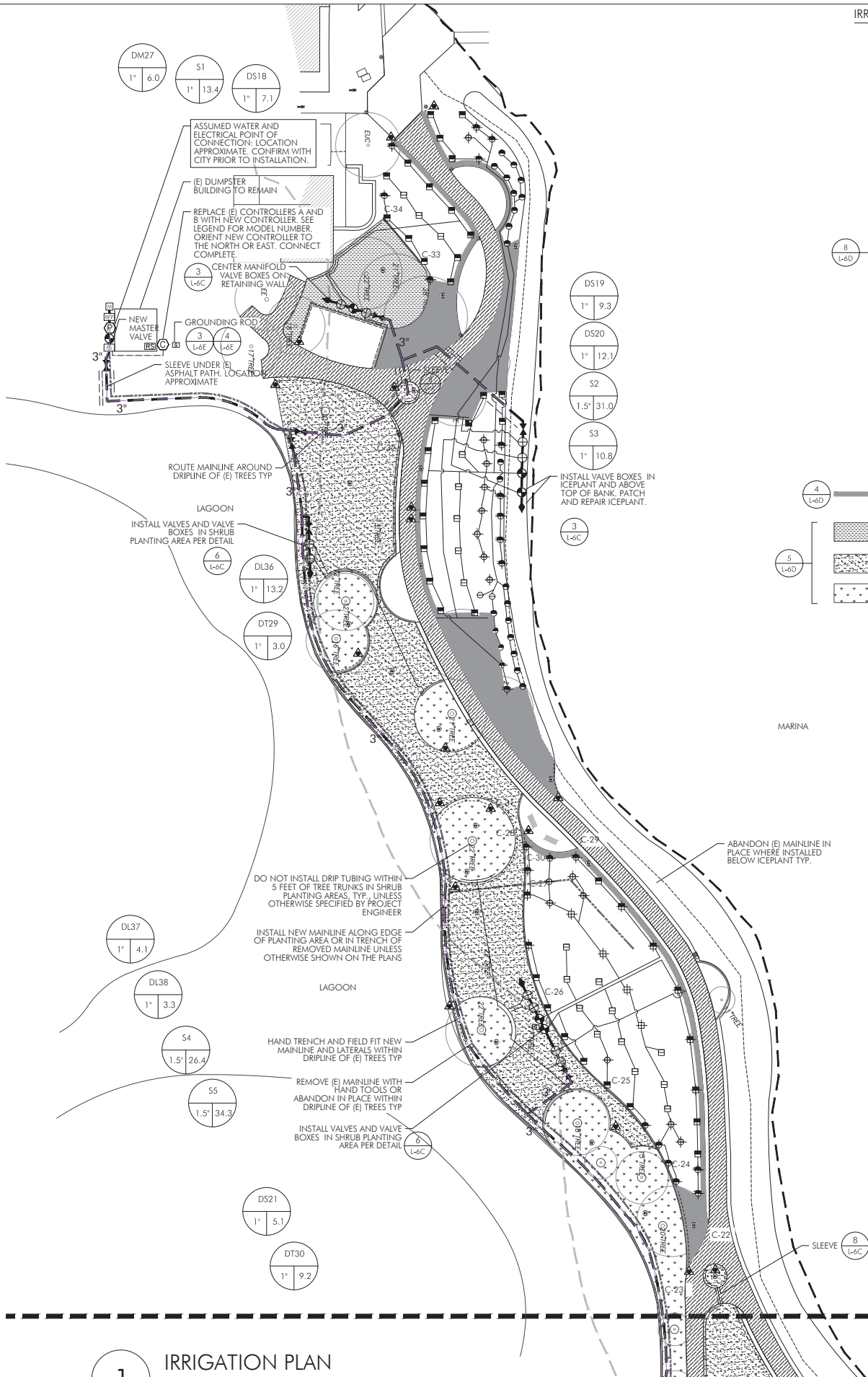
MARINA VILLAGE
SHORELINE PARK
PLANTING PLAN

APPROVED BY _____
CITY ENGINEER

DATE _____

SHEET <u>11</u> OF <u>19</u>	DWG. <u>9413</u>	CASE <u>75</u>
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IRRIGATION PARTS LEGEND

LOCATION DESCRIPTION	MODEL NUMBER	MODEL DESCRIPTION	OPERATION PRESSURE (PSI)
FULL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP800SR-360 (LIME GREEN)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER FULL-CIRCLE MP ROTATOR OR APPROVED EQUALS	30-55
PARTIAL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP800SR-90 (ORANGE)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER 90 TO 210 DEGREE ADJUSTABLE ARC MP ROTATOR. ADJUST ARC TO IRRIGATE TURF WITHOUT OVERSPRAY ONTO ADJACENT WALK, DG SEATING AREA, OR SHRUB PLANTING BED. OR APPROVED EQUALS	30-55
FULL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 1000-360 (OLIVE)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER FULL-CIRCLE MP ROTATOR OR APPROVED EQUALS	30-55
PARTIAL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 1000-90 (MAROON)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER 90 TO 210 DEGREE ADJUSTABLE ARC MP ROTATOR. ADJUST ARC TO IRRIGATE TURF WITHOUT OVERSPRAY ONTO ADJACENT WALK, DG SEATING AREA, OR SHRUB PLANTING BED. OR APPROVED EQUALS	30-55
FULL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 2000-360 (RED)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER FULL-CIRCLE MP ROTATOR OR APPROVED EQUALS	25-55
PARTIAL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 2000-90 (BLACK)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER 90 TO 210 DEGREE ADJUSTABLE ARC MP ROTATOR. ADJUST ARC TO IRRIGATE TURF WITHOUT OVERSPRAY ONTO ADJACENT WALK, DG SEATING AREA, OR SHRUB PLANTING BED. OR APPROVED EQUALS	25-55
PARTIAL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 2000-210 (GREEN)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER 210 TO 270 DEGREE ADJUSTABLE ARC MP ROTATOR. ADJUST ARC TO IRRIGATE TURF WITHOUT OVERSPRAY ONTO ADJACENT DG EXERCISE EQUIPMENT AREA. OR APPROVED EQUALS	25-55
FULL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 3000-360 (GRAY)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER FULL-CIRCLE MP ROTATOR OR APPROVED EQUALS	25-55
PARTIAL-CIRCLE SPRAY HEAD	PROS-06-PRS40-CV MP 3000-90 (BLUE)	HUNTER 6-INCH 40PSI-PRESSURE-REGULATED POP-UP SPRAY BODY NOZZLE: HUNTER 90 TO 210 DEGREE ADJUSTABLE ARC MP ROTATOR. ADJUST ARC TO IRRIGATE TURF WITHOUT OVERSPRAY ONTO ADJACENT WALK, DG SEATING AREA, OR SHRUB PLANTING BED. OR APPROVED EQUALS	25-55
DIPLINE AT TURF GRASS SOD	PLD-04-12-1000-CV	HUNTER 0.4 GPH DIPLINE WITH 12" EMITTER SPACING IN A 1,000 FT ROLL OR APPROVED EQUAL	40
DIPLINE AT MODERATE WATER USE PLANTINGS	PLD-04-18-1000-CV	HUNTER 0.4 GPH DIPLINE WITH 18" EMITTER SPACING IN A 1,000 FT ROLL OR APPROVED EQUAL	40
DIPLINE AT LOW WATER USE PLANTINGS	PLD-04-24-1000-CV	HUNTER 0.4 GPH DIPLINE WITH 24" EMITTER SPACING IN A 1,000 FT ROLL OR APPROVED EQUAL	40
DIPLINE BELOW TREES	PLD-04-24-1000-CV	HUNTER 0.4 GPH DIPLINE WITH 24" EMITTER SPACING IN A 1,000 FT ROLL OR APPROVED EQUAL	40
POP-UP INDICATOR	ECO-INDICATOR	HUNTER POP-UP INDICATOR OR APPROVED EQUAL	40-50

INITIAL IRRIGATION SCHEDULE

1. OPERATE THE IRRIGATION SYSTEM BETWEEN JANUARY 01 AND DECEMBER 31. CONTRACTOR SHALL ADJUST IRRIGATION SCHEDULES AS NEEDED TO SUSTAIN THE HEALTH AND VIGOR OF THE PLANTINGS.

IRRIGATION OPERATION SCHEDULE FOR SPRAY AT MP3,000s, MP2,000s, MP1,000s
ZONES 1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 14, 17
OPERATE 2 CYCLES PER WEEK ACCORDING TO THE FOLLOWING SCHEDULE:

MONTH	DURATION
JAN	11 MINUTES
FEB	11 MINUTES
MAR	20 MINUTES
APR	28 MINUTES
MAY	36 MINUTES
JUN	38 MINUTES
JUL	42 MINUTES
AUG	39 MINUTES
SEPT	34 MINUTES
OCT	22 MINUTES
NOV	10 MINUTES
DEC	7 MINUTES

IRRIGATION OPERATION SCHEDULE FOR SPRAY AT MP800s
ZONES 3, 15
OPERATE 2 CYCLES PER WEEK ACCORDING TO THE FOLLOWING SCHEDULE:

MONTH	DURATION
JAN	6 MINUTES
FEB	6 MINUTES
MAR	10 MINUTES
APR	14 MINUTES
MAY	18 MINUTES
JUN	19 MINUTES
JUL	21 MINUTES
AUG	20 MINUTES
SEPT	17 MINUTES
OCT	11 MINUTES
NOV	5 MINUTES
DEC	3 MINUTES

IRRIGATION OPERATION SCHEDULE FOR EXISTING SPRAYHEADS TO REMAIN
ZONES 6, 13, 16
OPERATE 2 CYCLES PER WEEK ACCORDING TO THE FOLLOWING SCHEDULE:

MONTH	DURATION
JAN	17 MINUTES
FEB	8 MINUTES
MAR	20 MINUTES
APR	20 MINUTES
MAY	26 MINUTES
JUN	27 MINUTES
JUL	30 MINUTES
AUG	28 MINUTES
SEPT	24 MINUTES
OCT	16 MINUTES
NOV	7 MINUTES
DEC	5 MINUTES

IRRIGATION OPERATION SCHEDULE FOR DIPL AT TURF
ZONES 18 THROUGH 26
OPERATE 2 CYCLES PER WEEK ACCORDING TO THE FOLLOWING SCHEDULE:

MONTH	DURATION
JAN	8 MINUTES
FEB	8 MINUTES
MAR	14 MINUTES
APR	20 MINUTES
MAY	26 MINUTES
JUN	27 MINUTES
JUL	31 MINUTES
AUG	28 MINUTES
SEPT	25 MINUTES
OCT	16 MINUTES
NOV	7 MINUTES
DEC	5 MINUTES

IRRIGATION OPERATION SCHEDULE FOR DIPL MODERATE WATER USE GROUNDCOVERS
ZONES 27, 28
OPERATE 2 CYCLES PER WEEK ACCORDING TO THE FOLLOWING SCHEDULE:

MONTH	DURATION
JAN	17 MINUTES
FEB	17 MINUTES
MAR	32 MINUTES
APR	45 MINUTES
MAY	58 MINUTES
JUN	61 MINUTES
JUL	69 MINUTES
AUG	63 MINUTES
SEPT	55 MINUTES
OCT	36 MINUTES
NOV	16 MINUTES
DEC	11 MINUTES

IRRIGATION OPERATION SCHEDULE FOR DIPL LOW WATER USE SHRUBS
ZONES 29 THROUGH 43
OPERATE 2 CYCLES PER WEEK ACCORDING TO THE FOLLOWING SCHEDULE:

MONTH	DURATION
JAN	24 MINUTES
FEB	24 MINUTES
MAR	44 MINUTES
APR	60 MINUTES
MAY	79 MINUTES
JUN	82 MINUTES
JUL	93 MINUTES
AUG	85 MINUTES
SEPT	74 MINUTES
OCT	48 MINUTES
NOV	22 MINUTES
DEC	14 MINUTES



IRRIGATION LEGEND

SYMBOL	NAME
	EXISTING IRRIGATION POINT OF CONNECTION - LOCATION APPROXIMATE
	EXISTING 2" WATER METER #2, REFERENCE NUMBER 31673897, TO BE PROTECTED IN PLACE - LOCATION APPROXIMATE
	EXISTING 2" FBECO 8254 RP BACK FLOW PREVENTER #E9411 TO BE PROTECTED IN PLACE - LOCATION APPROXIMATE
	FLOW SENSOR - SEE SPECS
	EV-CAB-SEN-IRBITROL RAIN MASTER 2-CONDUCTOR, SHIELDED, DIRECT-BURIAL CABLE FOR FLOW SENSORS. CABLE NEEDS TO RUN FROM PSD FLOW SENSOR TO CONTROLLER OUTPUT BOARD AND SHALL BE IN DIFFERENT TRENCH AS 110V WIRE. AVAILABLE AT SITEONE GREEN TECH LANDSCAPE SUPPLY, TEL: (510) 562-1247, 2100 DAVIS ST #387, SAN LEANDRO, CA, 94577
	CONTROLLER: 200 STATION SITEONE IRRITROL RAIN MASTER GT EAGLE PLUS TWO WIRE SATELLITE ASSEMBLY SA6-RM2-TW IRRIGATION CONTROLLER WITH ICENTRAL CAPABILITY, TOP ENTRY STAINLESS STEEL STRONG BOX PSD 14 GALUAGE STEEL ENCLOSURE W/ COMLOCK PLUS PADLOCK, AND 5-YEAR SERVICE CONTRACT, OR APPROVED EQUAL. REMOTE READY, RAIN SENSOR MODULE & TWO MV/FS INPUT. PROVIDE ELECTRICAL ON/OFF SWITCH INSIDE CABINET, TURN OVER 3 SETS OF KEYS TO CITY REPRESENTATIVE. ASSEMBLE PER STRONGBOX SPECIFICATIONS FOR INSTALLATION OF CONTROLLER ASSEMBLY KIT. CONTROLLER SHALL NOT FACE SOUTH. COORDINATE INSTALLATION WITH THE IRRIGATION MANUFACTURER SPECIFICATIONS MANAGER REPRESENTATIVE, SUCH AS MICHAEL SMITH AT TORO, MICHAEL.SMITH@TORO.COM, (707) 592-2530.
	IRBITROL PROMAX REMOTE CAC-RECIEVER IRRIGATION AND MAINTENANCE REMOTE WITH PRM-KIT PERMANENT MOUNT RECEIVER, OR APPROVED EQUAL. MOUNT MAINTENANCE RECEIVER INSIDE CONTROLLER AND MOUNT ANTENNA IN VANDAL-PROOF LOCATION.
	CONTROLLER ASSEMBLY AVAILABLE AT SITEONE GREEN TECH LANDSCAPE SUPPLY, TEL: (510) 562-1247, 2100 DAVIS ST #387, SAN LEANDRO, CA, 94577
	TWRS: TORO WIRELESS RAIN SENSOR CONNECTED TO RAIN SENSOR MODULE LOCATED IN CONTROLLER ENCLOSURE (OR APPROVED EQUAL), LOCATE RAIN SENSOR IN LOCATION UNOBSTRUCTED FROM ACCURATELY MEASURING RAIN & TEMP. PLACE SENSOR IN A INCONSPICUOUS VANDAL FREE LOCATION WITHIN 200' OF THE CONTROLLER WITH CITY MAINTENANCE PERSONNEL. RAIN SENSOR AVAILABLE AT SITEONE GREEN TECH LANDSCAPE SUPPLY, TEL: (510) 562-1247, 2100 DAVIS ST #387, SAN LEANDRO, CA, 94577
	CONTROL WIRE: TORO TW-CAB-14 JACKETED 2-WIRE DECODER COMM CABLE OR APPROVED EQUAL. TWO-CONDUCTOR, SOLID-CORE, TWISTED, COLOR-CODED RED AND BLUE, DIRECT BURIAL PE JACKET 14AWG/1.6 MM DIAMETER COPPER WIRES. INSTALL PARALLEL TO MAINLINE WITH PVC SCHEDULE 40 ELECTRICAL CONDUIT UNDER PAVING, SIZE AS REQUIRED. CONTROL WIRE AVAILABLE AT SITEONE GREEN TECH LANDSCAPE SUPPLY, TEL: (510) 562-1247, 2100 DAVIS ST #387, SAN LEANDRO, CA, 94577
	GROUNDING ROD: GROUNDING ROD TO BE INSTALLED MINIMUM OF 8 FEET FROM CONTROLLER AND PERPENDICULAR TO 2-WIRE PATH. PLACE INSIDE PULL BOX. SEE
	ISOLATION VALVE
	REMOTE CONTROL VALVE ASSEMBLY
	DRIP ZONE KIT
	QUICK COUPLING VALVE
	NEW MAINLINE: SIZE AS INDICATED ON THE PLANS OR AS APPROVED BY THE OWNER'S REPRESENTATIVE
	3" MAINLINE SIZING
	LATERAL LINE PIPE. SEE PIPE SIZE CHART FOR SIZING
	IRRIGATION SLEEVE. SIZE AS REQUIRED. PATCH AND REPAIR (E) ASPHALT AS REQUIRED.
	0.4 GPH DIPLINE WITH EMITTERS AT 12" ON CENTER
	0.4 GPH DIPLINE WITH EMITTERS AT 18" ON CENTER
	0.4 GPH DIPLINE WITH EMITTERS AT 24" ON CENTER
	0.4 GPH DIPLINE WITH EMITTERS AT 24" ON CENTER
	EMITTER MANUAL FLUSH VALVE ASSEMBLY
	AIR VACUUM RELIEF VALVE (AVRV) AND BOX. CROSS-CONNECT ALL DRIPPERLINES TO AVRV WITH BLANK TUBING.
	DIPLINE COLLECTOR LATERAL LINES
	VALVE
	APPROXIMATE FLOW (GPM)
	REMOTE CONTROL VALVE SIZE
	IRRIGATION TYPE:
	DS: DIPLINE AT TURF GRASS SOD
	DM: DIPLINE AT MODERATE WATER USE GROUNDCOVERS
	DL: DIPLINE AT LOW WATER USE SHRUBS
	DT: DIPLINE BELOW TREES
	S: SPRAY

LATERAL PIPE SIZE CHART	
GPM	DIAMETER (IPS)
0-6	1"
6-12	1 1/4"
12-22	1 1/2"
22-50	2"
50-60	2 1/2"
60-64	3"

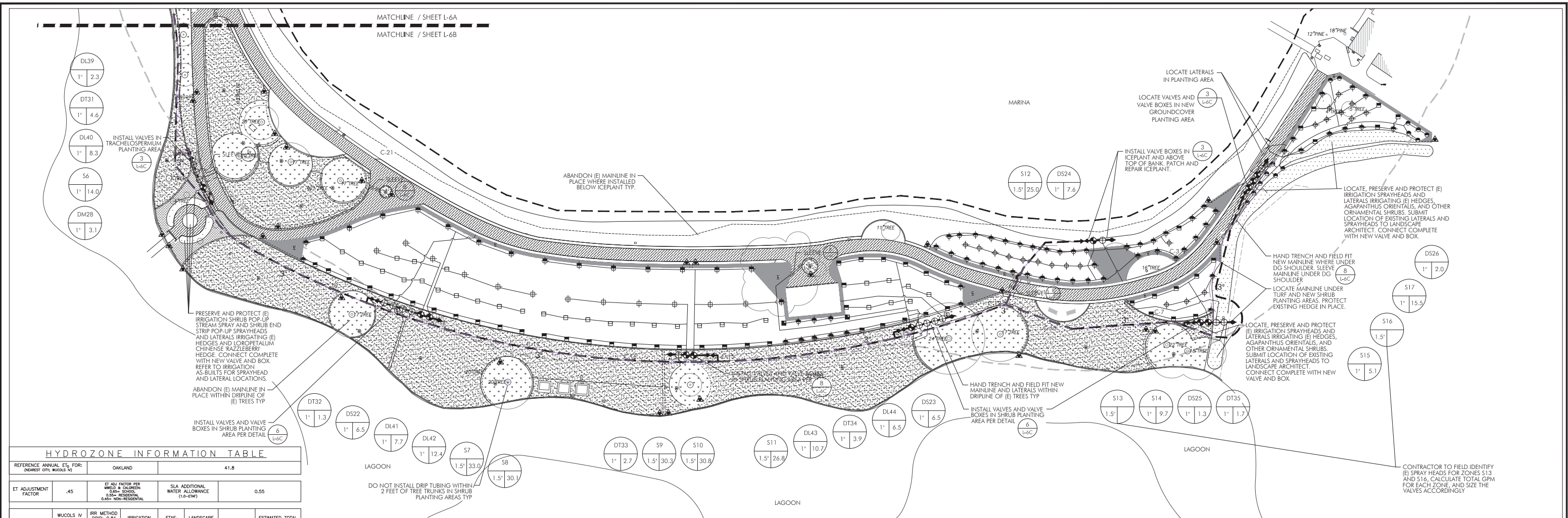


BID SET SUBMITTAL

BENCH MARK	REFERENCE	NO.	REVIEWED	BY	APP.
		DESIGNED	ITS		
		DRAWN	ITS		
		CHECKED	ICM		
		DATE	07-30-18	SCALE	AS NOTED

CITY OF ALAMEDA CALIFORNIA ENGINEERING DEPARTMENT	MARINA VILLAGE SHORELINE PARK IRRIGATION PLAN AND LEGEND L-6A
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APPROVED BY	CITY ENGINEER
DATE	12 OF 19
SUBBY	9413
DATE	75



HYDROZONE INFORMATION TABLE		
REFERENCE ANNUAL ET _a FOR: (NEAREST CITY: WUCOLS M)	OAKLAND	41.8

ET ADJUSTMENT FACTOR	.45	ET ADJ FACTOR PER MWELD & CALIFORNIA: 0.65- RESIDENTIAL 0.65- NON-RESIDENTIAL	SLA ADDITIONAL WATER ALLOWANCE (1.0-ETW)	0.55
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HYDROZONE	WUCOLS IV PLANT FACTOR (PF)	IRR METHOD DRAIN: 0.81 SUBB: 0.81 SPRAY: 0.75	IRRIGATION EFFICIENCY (IE)	ETAF _a (PF/IE)	LANDSCAPE AREA (SQ FT)	ETAF _a X AREA	ESTIMATED TOTAL WATER USE (ETWU)
S6	0.6	S	0.75	0.80	385	308.00	7982.13
S13	0.6	S	0.75	0.80	315	732.00	18970.51
S16	0.6	S	0.75	0.80	2105	1684.00	43642.54
DM27	0.6	D	0.81	0.74	2029	1502.96	38950.79
DM28	0.6	D	0.81	0.74	1059	784.44	20329.66
DT29	0.3	D	0.81	0.37	1781	659.63	17094.96
DT30	0.3	D	0.81	0.37	5420	2007.41	52623.97
DT31	0.3	D	0.81	0.37	2706	1002.22	25973.59
DT32	0.3	D	0.81	0.37	769	284.81	7381.26
DT33	0.3	D	0.81	0.37	1588	588.15	15242.45
DT34	0.3	D	0.81	0.37	2312	856.30	22191.77
DT35	0.3	D	0.81	0.37	1015	375.93	9742.50
DL36	0.3	D	0.81	0.37	7897	2824.81	75799.50
DL37	0.3	D	0.81	0.37	2471	915.19	23717.94
DL38	0.3	D	0.81	0.37	1960	725.93	18813.10
DL39	0.3	D	0.81	0.37	1329	492.22	12756.43
DL40	0.3	D	0.81	0.37	4948	1832.59	47493.47
DL41	0.3	D	0.81	0.37	4621	1711.48	44354.75
DL42	0.3	D	0.81	0.37	7623	2823.33	73169.51
DL43	0.3	D	0.81	0.37	7012	2597.04	67304.81
DL44	0.3	D	0.81	0.37	3870	1433.33	37146.27
				TOTAL	63815.00	26241.78	680,081.91

SPECIAL LANDSCAPE AREAS - RECREATION AREA (TURF)							
S1	S	1	1502	1502.00	36,925.63		
S2	S	1	3494	3494.00	90,550.50		
S3	S	1	1165	1165.00	30,192.14		
S4	S	1	3175	3175.00	82,283.30		
S5	S	1	4076	4076.00	105,633.62		
S7	S	1	3990	3990.00	103,404.84		
S8	S	1	3990	3990.00	103,404.84		
S9	S	1	4329	4329.00	112,190.36		
S10	S	1	4329	4329.00	112,190.36		
S11	S	1	3810	3810.00	98,739.96		
S12	S	1	2882	2882.00	74,689.91		
S14	S	1	1206	1206.00	31,254.70		
S15	S	1	424	424.00	10,988.38		
S17	S	1	1864	1864.00	48,307.42		
DS18	D	1	1059	1059.00	27,445.04		
DS19	D	1	1391	1391.00	36,049.16		
DS20	D	1	1816	1816.00	47,063.46		
DS21	D	1	759	759.00	19,670.24		
DS22	D	1	972	972.00	25,190.35		
DS23	D	1	972	972.00	25,190.35		
DS24	D	1	1134	1134.00	29,388.74		
DS25	D	1	193	193.00	5,001.79		
DS26	D	1	306	306.00	7,930.30		
		TOTAL	48,838	488,380.00	1,265,685.61		
		TOTAL LANDSCAPE AREA (LA + SLA)		112,653.00			

TOTAL ETWU	TOTAL ETWU ALL AREAS (SLA AND REGULAR LA)	TOTAL ETWU	1,945,767.52
MAWA	(ANNUAL ET ₀)(0.62 CONVERSION FACTOR) [(ET ADJUSTMENT FACTOR)(TOTAL LANDSCAPE AREA) + ((1-ETAF)(SLA))]	MAWA	2,009,908.90
AVERAGE ETAF	SUM(ETAF X AREA) / TOTAL AREA (AVERAGE ETAF AS DESIGNED, EXCLUSIVE OF SLA)		0.41
SITEWIDE ETAF	TOTAL ETAF X AREA / TOTAL LANDSCAPE AREA (INCLUDES SLA)		0.67

CALCULATIONS BASED ON JULY 2015 EMERGENCY WATER EFFICIENCY REGULATIONS PROPOSED CHANGES TO WATER USE REGULATIONS. REFER TO HYDROZONE TABLE.

EXECUTIVE ORDER B-29-15 MODEL WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE: I HAVE COMPLIED WITH THE CRITERIA OF THE 2015 MWELD ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.

INGRID MORKEN, STATE OF CALIFORNIA LICENSED LANDSCAPE ARCHITECT, LICENSE NO. 5472

IRRIGATION PLAN

IRRIGATION NOTES:

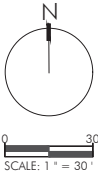
- REFER TO AS-BUILT IRRIGATION DRAWINGS PROVIDED BY THE CITY FOR EXISTING IRRIGATION SYSTEM LAYOUT.
- THE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING BID.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY LICENSED CONTRACTORS AND EXPERIENCED WORKERS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATING TO THEIR WORK.
- THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, ETC. SHOWN IS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED AS EFFICIENTLY POSSIBLE. PIPES ARE NOT TO BE INSTALLED DIRECTLY ABOVE ONE ANOTHER. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR IS REQUIRED TO INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES WHICH MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IN THE EVENT OF FIELD DIFFERENCES, THE CONTRACTOR IS REQUIRED TO PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNERS REPRESENTATIVE AND ACCORDING TO THE SPECIFICATIONS. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING, STRUCTURE, ETC., BEFORE CONSTRUCTION. IN THE EVENT THESE ASSUMPTIONS ARE NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REQUIRED REVISIONS. CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO EXCAVATION OF TRENCHES. CONTRACTOR IS TO REPAIR ANY DAMAGED CAUSED BY THEIR WORK AT NO ADDITIONAL COST TO THE OWNER.

- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE IRRIGATION DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- THE CONTRACTOR SHALL CONTACT THE CITY OF ALAMEDA TO COORDINATE EXISTING SYSTEM SHUT-DOWN. CONTACT JOHN McDONALD, JMCDONAL@ALAMEDACA.GOV, (510) 773-3889, AND BILL HUDSON, BHUDSON@ALAMEDACA.GOV, (510) 747-7587
- 120-VOLT ELECTRICAL POWER SERVICE TO THE CONTROLLER LOCATION SHALL BE PROVIDED BY THE CITY OF ALAMEDA. THE CONTRACTOR SHALL MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SERVICE TO THE AUTOMATIC CONTROLLER.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CITY REGARDING WHICH IRRIGATION EQUIPMENT TO PROTECT IN PLACE, DISCONNECT, AND CONNECT TO AT THE POINT OF CONNECTION.
- SEE TYPICAL UTILITY CROSSING DETAIL FOR TRENCHING OF OVERLAPPING ELECTRICAL CONDUIT AND IRRIGATION INFRASTRUCTURE.
- THE CONTRACTOR SHALL SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE IRRIGATION MANUFACTURER SPECIFICATIONS MANAGER REPRESENTATIVES, SUCH AS MICHAEL SMITH AT RAIN MASTER (707) 592-2530 MICHAEL.SMITH@TORO.COM, AND CHRISTINE HAWKINS AT HUNTER, CHRISTINE.HAWKINS@HUNTERINDUSTRIES.COM, (450) 288-5308, PRIOR TO INSTALLATION OF THE IRRIGATION SYSTEM.
- THE CONTRACTOR SHALL USE DIFFERENT COLORS FOR EACH CONTROL WIRE.
- ROUTE CONTROL WIRES AND ELECTRICAL CONDUIT THROUGH SEPARATE SLEEVE FROM THE MAINLINE.
- THE CONTRACTOR SHALL INSTALL LIGHTNING ARRESTORS EVERY 600 FEET AND ON EVERY BRANCH OF 2-WIRE PATH, IN A VALVE BOX, AND GROUNDED ACCORDINGLY.
- INSTALL DECODERS AS REQUIRED AT EACH GROUP OF REMOTE CONTROL VALVES. THE STATION DECODER MODULES ARE AVAILABLE IN 1-STATION, 2-STATION, AND 4-STATION CONFIGURATIONS. INSTALL DECODERS IN VALVE BOX WITH A REMOTE CONTROL VALVE.

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE, AND WIND EXPOSURES.
- THE CONTRACTOR SHALL SEND THE IRRIGATION SCHEDULE BY VALVE TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO OPERATION. REMOTE CONTROL VALVES AND DRIP ZONE KITS SHALL BE PROGRAMMED IN SEQUENCE AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL SCHEDULE THE ZONES SUCH THAT THE IRRIGATION SYSTEM USES NO MORE THAN 35 GPM AT ANY GIVEN TIME.
- THE CONTRACTOR SHALL FLAG THE MAINLINE, LATERAL, AND VALVE LOCATIONS. THE OWNER'S REPRESENTATIVE SHALL REVIEW AND APPROVE THE LOCATION OF THE MAINLINE, LATERALS, AND VALVES PRIOR TO GROUND DISTURBANCE.
- IN ADDITION TO THE SLEEVES AND CONDUITS SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF SLEEVES AND CONDUITS OF SUFFICIENT SIZE UNDER ALL PAVED AREAS.
- THE CONTRACTOR SHALL SLEEVE ALL LATERALS AND MAINLINE PASSING UNDERNEATH THE CONCRETE MOW BAND.
- ALL EXCAVATIONS ARE TO BE FILLED WITH COMPACTED BACKFILL. REPAIR ALL SETTLED TRENCHES PROMPTLY, FOR A PERIOD OF 90 DAYS AFTER COMPLETION OF WORK.
- NOTIFY UNDERGROUND SERVICE ALERT AT 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL OPTIMIZE VALVE BOX LAYOUT TO MINIMIZE THE TOTAL NUMBER OF VALVE BOXES REQUIRED.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM PRESSURE OF 62 PSI AT THE POINT OF CONNECTION, A MAXIMUM FLOW OF 35 GPM AT THE POINT OF CONNECTION, AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS. CONTRACTOR TO VERIFY PRESSURE AND FLOW AT POINT OF CONNECTION AND INFORM THE PROJECT ENGINEER OF ANY DISCREPANCIES.

- THE CONTRACTOR SHALL VERIFY MINIMUM STATIC PRESSURE OF 40 PSI AT REMOTE CONTROL VALVES AND 25 PSI AT DRIP ZONE KITS. REPORT ANY DISCREPANCIES TO THE OWNERS REPRESENTATIVE AND OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL STRETCH THE DRIP TUBING PRIOR TO INSTALLATION. DRIP TUBE SPACING SHALL MATCH THE DRIP TUBE EMITTER SPACING. THE OWNERS REPRESENTATIVE SHALL APPROVE THE DRIP TUBE LAYOUT PRIOR TO THE INSTALLATION OF MULCH OR TURF.
- ON ALL SLOPES AND MOUNDS, PLACE THE DRIPLINE PARALLEL TO THE SLOPE CONTOUR WHERE POSSIBLE.
- THOROUGHLY FLUSH EACH DRIP INSTALLATION SEGMENT TO ENSURE NO DEBRIS CONTAMINATION OCCURS.
- LOCATE AIR VACUUM RELIEF VALVES AS NECESSARY TO PREVENT AIR BUBBLES FROM FORMING IN THE DRIP TUBING. INSTALL AVRV'S AT HIGH POINTS OF EACH PLANTING AREA. AVRV'S ARE SHOWN TO INDICATE INTENT - LOCATE AS REQUIRED BASED UPON ACTUAL GRADES OF THE SITE. LOCATE (1) AVRV PER 500 FT OF DRIPLINE TUBING, TYP. SEE IRRIGATION DETAILS.
- LOCATE FLUSH VALVES AT THE HYDRAULIC CENTER OF THE EXHAUST HEADER OR AT LOW POINTS ON SLOPES AT CONVENIENT ACCESSIBLE LOCATION ADJACENT TO PAVEMENT, DG, OR TURF.
- PVC DISTRIBUTION AND COLLECTOR LATERAL LINES SHALL BE THE SAME SIZE FOR THE ENTIRE DRIP ZONE.
- MAKE ADJUSTMENTS TO THE SYSTEM AS NECESSARY TO PROVIDE FULL COVERAGE TO PLANTS WITHIN ALL AREAS TO BE PLANTED. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY ASPECTS OF LAYOUT THAT WILL PROVIDE INCOMPLETE OR INSUFFICIENT WATER COVERAGE OF PLANT MATERIAL AND DO NOT PROCEED UNTIL THEIR INSTRUCTIONS ARE OBTAINED.
- CONTRACTOR TO ADJUST DRIP SOAK CYCLE TO CREATE UNIFORM WATER MOVEMENT THROUGH THE SOIL.

- THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRAY HEADS FOR OPTIMUM PERFORMANCE. PROVIDE FULL AND EVEN COVERAGE OF DESIGNATED AREAS AND PREVENT OVER SPRAY ONTO LAGOONS, PATHWAYS, DG SHOULDERS, DG SEATING AREAS, EXISTING OR NEW SHRUB BEDS, AND/OR BUILDINGS AS MUCH AS POSSIBLE.
- THE CONTRACTOR SHALL LOCK ALL VALVE BOXES UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.
- MAINTENANCE STAFF TRAINING: PERFORM A FULL INSTRUCTION SESSION IN THE PRESENCE OF THE DESIGNATED MAINTENANCE PERSONNEL DEMONSTRATING THE IRRIGATION CONTROLLER SYSTEM, PROGRAM ADJUSTMENT AND OVER-RIDES, SYSTEM TESTING, TROUBLE-SHOOTING, ETC. INCLUDE INSTRUCTIONS ON HOW TO TURN OFF SYSTEM IN CASE OF EMERGENCY.



BID SET SUBMITTAL

CITY OF ALAMEDA
CALIFORNIA
ENGINEERING DEPARTMENT

MARINA VILLAGE

SHORELINE PARK

IRRIGATION PLAN AND NOTES
L-6B



APPROVED BY

CITY ENGINEER

DATE

SUBMIT

DWG.

CASE

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