LIST OF SYMBOLS

SYMBOL	DESCRIPTION
A-1,3	CONDUIT RUN EXPOSED. HASH MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS IN CONDUIT. SIZE PER CODE. ARROW INDICATES HOME RUN TO PANEL "A" CIRCUITS 1 AND 3 (COMMON NEUTRAL).
	CONDUIT RUN IN FLOOR, SLAB OR UNDERGROUND.
	FLEXIBLE CONDUIT CONNECTION WITH INTEGRAL GROUND CONDUCTOR
	INCOMING LINE.
	FLUORESCENT LIGHTING FIXTURE. TYPE AND MOUNTING AS NOTED.
S a	SINGLE-POLE TOGGLE SWITCH, 120V, 20A, HUBBLE #1223 "a" DENOTES OUTLETS CONTROLLED BY SWITCH.
S 2	DOUBLE-POLE TOGGLE SWITCH, 120V, 20A HUBBLE #1222.
SM	MANUAL MOTOR STARTER, 1 HP MAX. 120V WITH OVERLOAD HEATER FOR MOTOR SIZE INDICATED ON PLANS.
WP	DUPLEX CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE, 120VAC, 20A. MOUNTING HEIGHT AS NOTED. WP = OUTDOOR WEATHERPROOF. GFCI = GROUND FAULT CIRCUIT INTERRUPTER.
	ENCLOSURE TO BE DESCRIBED ON DRAWING.
	SURFACE MOUNTED PANEL.
	LINE DISCONNECT SWITCH. NON-FUSED UNLESS OTHERWISE NOTED. SWITCH RATING AS NOTED ON PLANS OR SPECIFICATIONS. NF = NON-FUSED. F = FUSED.
LOS	CONTROL STATION FOR MOTOR. SEE SCHEMATIC FOR SWITCH ARRANGEMENT. LOS = LOCK-OUT-STOP.
15	ELECTRIC MOTOR, NUMBER INDICATES HORSEPOWER

SYMBOL	DESCRIPTION
J JB	JUNCTION BOX. AT ALL OUTDOOR LOCATIONS, BOX SHALL INCLUDE A NEMA 4 ENCLOSURE WITH HUBS FOR ALL CONDUIT ENTRANCES.
	DEVICE LOCATED IN FIELD ON OR NEAR PUMP (MOTOR).
	TRANSFORMER. DESCRIPTION AS NOTED ON PLANS OR SPECIFICATIONS.
T	TRANSFORMER.
300AT / 400AF	THERMAL MAGNETIC BREAKER. 300 AT INDICATES TRIP AMPS. 400 AF INDICATES FRAME SIZE.
30 / *	CIRCUIT BREAKER. UPPER NUMBER IS CONTINUOUS TRIP ELEMENT RATING. * INDICATES FIELD SETTING BASED ON INSTALLED MOTOR.
	FUSE.
T	THERMOSTAT. MOUNT AS NOTED ON PLANS.
15 OR 15	SQUIRREL CAGE MOTOR. 15 INDICATES HORSEPOWER.
M	POWER COMPANY METERING. SEE PLANS AND SPECIFICATIONS.
	GROUND.
	GROUND ROD 3/4" X 10' COPPERCLAD UNLESS OTHERWISE NOTED.
	GROUND WELL.
	NORMALLY OPEN PUSH BUTTON- MOMENTARY TYPE. DOTTED LINE INDICATES DEVICE MOUNTED REMOTE FROM PANEL.
	NORMALLY CLOSED PUSH BUTTON-MOMENTARY TYPE.
LOS	LOCK-OUT-STOP PUSH BUTTON WITH LOCKING DEVICE.
WPFR	NORMALLY OPEN INTERLOCK. LETTERS IDENTIFY RELAY COIL.
WPFR	NORMALLY CLOSED INTERLOCK. LETTERS IDENTIFY RELAY COIL

SYMBOL	DESCRIPTION
WP FR	CONTROL RELAY. LETTERS IN CIRCLE IDENTIFY RELAY COIL
WP CT	TIME DELAY RELAY. LETTERS IN CIRCLE IDENTIFY TIME DELAY RELAY. SEE SCHEMATIC FOR OPERATING PARAMETERS. PROVIDE POWER CONNECTION AS REQUIRED.
NCTO	NORMALLY CLOSED CONTACT TIMED TO OPEN AFTER ENERGIZATION.
NOTC	NORMALLY OPEN CONTACT TIMED TO CLOSE AFTER ENERGIZATION.
NCTC	NORMALLY CLOSED CONTACT. INSTANT OPEN ON ENERGIZATION. TIMED TO CLOSE AFTER DE-ENERGIZATION.
NOTO	NORMALLY OPEN CONTACT. INSTANT CLOSE ON ENERGIZATION. TIMED TO OPEN AFTER DE-ENERGIZATION.
TSH	TEMPERATURE SWITCH. NORMALLY CLOSED.
TSH	TEMPERATURE SWITCH. NORMALLY OPEN.
PSH	PRESSURE SWITCH. NORMALLY CLOSED.
PSL	PRESSURE SWITCH. NORMALLY OPEN.
OFF	ON-OFF SWITCH.
R	INDICATING LIGHT. R=RED, G=GREEN, W=WHITE.
	CONDUCTORS-CONNECTED.
	CONDUCTORS- NOT CONNECTED.
RTM	RUN TIME METER.
	SPACE HEATER.
	TELEPHONE OUTLET.
4	MAGNETIC MOTOR STARTER, NEMA SIZE 4
SS	SOLID STATE SOFT STARTER

LIST OF ABBREVIATIONS

A	AMPERE	EL	ELEVATION	LTG	LIGHTING	PT	PRESSURE TRANSDUCER
AC	ALTERNATING CURRENT	GND	GROUND	M	MOTOR, MAGNETIC STARTER	PWR	POWER
A I C	AMPERES INTERRUPTING CAPACITY	HOA	HAND-OFF-AUTOMATIC	mA	MILLIAMP	REC	RECEPTACLE
AFF	ABOVE FINISHED FLOOR	HP	HORSEPOWER	MCC	MOTOR CONTROL CENTER	RPM	REVOLUTIONS PER MINUTE
ALT	ALTERNATOR	HZ	HERTZ	MCP	MOTOR CIRCUIT PROTECTOR	RTM	RUNNING TIME METER
APPROX	APPROXIMATELY	INSTR	INSTRUMENTATION	MCS	MOLDED CASE SWITCH	RTU	REMOTE TELEMETRY UNIT
AWG	AMERICAN WIRE GAUGE	JP	JOCKEY PUMP	MH	MANHOLE	SHLD	SHIELDED
BC	BARE COPPER	KVA	KILOVOLT AMPERES	MIN	MINIMUM	SHT	SHEET
BKR	BREAKER	KW	KILOWATT	MTD	MOUNTED	TS	TEMPERATURE SWITCH/TORQUE SWITCH
BLDG	BUILDING	KWH	KILOWATT HOUR	NA	NOT APPLICABLE	SIGS	SIGNALS
BP	BOOSTER PUMP	LCL	LEAST COMMON LOAD	N/C	NORMALLY CLOSED	TDR	TIME DELAY RELAY
C	CONDUIT	LOS	LOCK-OUT STOP	NIC	NOT IN CONTRACT	TYP	TYPICAL
C & I	CONTROLS & INSTRUMENTATION	LP	LIGHTING PANEL	NO	NORMALLY OPEN, NUMBER	TSP	TWISTED SHIELDED PAIR
CKT	CIRCUIT	LPU	LIVE PROTECTION UNIT	NTS	NOT TO SCALE	ULT	ULTRASONIC LEVEL TRANSDUCER
CO	CONDUIT ONLY	LSH	LEVEL SWITCH HIGH	O/L	OVERLOAD	V	VOLT, VOLTMETER
COMB	COMBINATION	EM	EMERGENCY	P	POLE, PHASE	VFD	VERIABLE FREQUENCY DRIVE
CONT	CONTROL	FLA	FULL LOAD AMPERES	PB	PULL BOX, PUSH BUTTON	W	WATT
CPT	CONTROL POWER TRANSFORMER	FLEX	FLEXIBLE	PCP	PUMP CONTROL PANEL	W/	WITH
DC	DIRECT CURRENT	FLUOR	FLOURESCENT	PI	PRESSURE INDICATOR	WP	WEATHER PROOF
DISCH	DISCHARGE	FS	FLOW SWITCH	PLC	PROGRAMABLE LOGIC CONTROLLER	XFMR	TRANSFORMER
DN	DOWN	FT	FOOT I FLOW TRANSMITTER	PVC	POLYVINYL CHLORIDE	XMTR	TRANSMITTER
DWG	DRAWING	G	GREEN	PRESS	PRESSURE	XP	EXPLOSION PROOF
EF	EXHAUST FAN	GD	GAS DETECTOR	PSH	PRESSURE SWITCH HIGH	ZS	POSITION SWITCH (LIMIT SWITCH)

REGISTERED PROFESSIONAL ENGINEER GARY J. HOBSON No. 40779 Exp. 3/31/11 CIVIL STATE OF CALIFORNIA

0 ½ 1 — 24x36 FORMAT IF THIS BAR MEASURES 1" THEN DRAWING SCALE IS AS NOTED
12x18 FORMAT
0 ¼ ½ — WARNING IF THIS BAR MEASURES 1/2" THEN DRAWING IS NOT FULL SCALE AND IS 50% REDUCED

Designed by	Drawn by	Checked by
JUSTIN M. LEE	CADD	GARY J. HOBSON

PLANS PREPARED UNDER SUPERVISION OF GARY J. HOBSON
Date MARCH 2010 R.C.E. No. 40779

Date	By	REVISIONS	App'd

AKM CONSULTING ENGINEERS
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(949) 753-7333

CDWP _____
WMWD _____

Department of Water and Power Approval
By _____ Donald A. Williams, P.E. R.C.E. No. 32333 EXP 12/31/2010

Approved _____
By _____ Jeffrey D. Sims, P.E. R.C.E. No. 46212, Exp. 12/31/10 Assistant General Manager/ Chief Operations Officer

Approved _____
By _____ Kip D. Field, P.E. R.C.E. No. 45679, Exp. 12/31/10 Public Works Director

CITY OF CORONA - ARLINGTON DESALTER CONNECTION
WESTERN MUNICIPAL WATER DISTRICT - PROMENADE CONNECTION

ELECTRICAL SYMBOLS AND LEGEND

Drawing No. 09-050U
E-1
Sht. 15 of 24

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