



Site Plan  
Scale: None

	TYPICAL CIRCUIT BREAKER		UNDERWATER LIGHT FIXTURE
	MANUALLY OPERATED SWITCH		TYPICAL SOLENOID VALVE
	PUSH BUTTON SWITCH, N.C.		UNDERWATER JUNCTION BOX
	PUSH BUTTON SWITCH, N.O.		UNDERWATER JUNCTION BOX
	CIRCUIT CONTROL RELAY, TYP.		TYPICAL CIRCUIT RELAY COIL
	MOTOR TYPE TIME CLOCK, TYP.		TYP. CIRCUIT RELAY CONTACT
	TYPICAL LIGHTING CONTACTOR		MOTOR, NUMBER INDICATES HP
	FLUORESCENT LIGHT FIXTURE		LIGHT LETTER IN CENTER INDICATES LENS COLOUR SEE ABBREVIATION SCHEDULE, E1
	N.O. ELECTRICAL CONTACTS		SCHEMATIC WIRE JUMP POINTS
	N.C. ELECTRICAL CONTACTS		110 VAC RECEPTACLE, TYP.
	THERMAL OVERLOAD CONTACTS		CONDUIT RUN, CONCEALED
	TYPICAL WIRE JUNCTION DOT		CONDUIT RUN, EXPOSED TYPE
	FLUORESCENT LIGHT FIXTURE		FLEXIBLE LIGHT POWER CORD
	N.O. ELECTRICAL CONTACTS		CONDUIT HOME RUN TO PANEL
	N.C. ELECTRICAL CONTACTS		INDICATES # OF CONDUCTORS
	THERMAL OVERLOAD CONTACTS		GROUND CONNECTION SYMBOL
	TYPICAL WIRE JUNCTION DOT		TYPICAL TERMINAL BLOCK
	FLUORESCENT LIGHT FIXTURE		SWITCH MOUNTED IN PD BOX

Electrical Symbols  
Scale: None

3PH.....THREE PHASE	EFF.....EFFICIENCY	OD.....OUTSIDE DIAMETER
A.....AMPERE	ELEV.....ELEVATION	OPP.....OPPOSITE
ALT.....ALTERNATING CURRENT	ELEC.....ELECTRIC, ELECTRICAL	P.....POINT
ADD.....ADDENDUM	ELEV.....ELEVATION	PC.....PERSONAL COMPUTER
ADJ.....ADJACENT, ADJUSTABLE	EQ.....EQUIPMENT	PH.....PHASE
ALT.....ALTERNATE	F.....FAHRENHEIT	PLC.....PROGRAMMABLE LOGIC CONTROLLER
AMP.....AMPERE	FF.....FINISHED FLOOR	PROJ.....PROJECT
APPRD.....APPROVED	GFCI.....GROUND FAULT CIRCUIT INTERRUPT	RBP.....RED BRASS PIPE
APPROX.....APPROXIMATE	GFI.....GROUND FAULT INTERRUPT	REQD.....REQUIRED
ARCH.....ARCHITECTURAL	GND.....GROUND	REV.....REVERSE
ASA.....AMERICAN STANDARDS ASSOC.	H. O. A.....HAND-OFF-AUTO	RMS.....ROOT MEANS SQUARE
AUTO.....AUTOMATIC	HORIZ.....HORIZONTAL	RPM.....REVOLUTIONS PER MINUTE
AWG.....AVERAGE WIRE GAUGE	HP.....HORSEPOWER	S. S.....STAINLESS STEEL
B.....BLUE	HZ.....HERTZ	SECT.....SECTION
BC.....BETWEEN CENTERS	ID.....INSIDE DIAMETER	SPDT.....SINGLE POLE DOUBLE THROW
BET.....BETWEEN	IN.....INCH	SPEC.....SPECIFICATION
BHP.....BRAKE HORSEPOWER	INFO.....INFORMATION	SPST.....SINGLE POLE SINGLE THROW
BKR.....CIRCUIT BREAKER	INSTL.....INSTALL, INSTALLATION	SQ.....SQUARE
BLDG.....BUILDING	J.B.....JUNCTION BOX	STD.....STANDARD
BO.....BOTTOM OF	KVA.....KILO-VOLTAMPERES	SW.....SWITCH
BZ.....BRONZE	KW.....KILOWATTS	SW.....SWITZ
C.....CONDUIT	LCL.....LONG CONTINUOUS LOAD	T.....TYPICAL
C TO C.....CENTER TO CENTER	MAINT.....MAINTENANCE	TEMP.....TEMPERATURE
CAB.....CABINET	MAN.....MANUAL	THRU.....THROUGH
CB.....CIRCUIT BREAKER	MATL.....MATERIAL	T.L.A.....THREE LETTER ACRONYM
CBM.....CUBIC FEET PER MINUTE	MAX.....MAXIMUM	UL.....UNDERWRITER'S LABORATORIES
CCR.....CIRCUIT RELAY	MCB.....MAIN CIRCUIT BREAKER	UN.....UNLESS OTHERWISE NOTED
CLR.....CLEAR	MECH.....MECHANICAL	V.....VOLT
COL.....COLUMN	MFG.....MANUFACTURER	VA.....VOLTAMPERES
COMP.....COMPUTER	MFR.....MANUFACTURER	VAC.....VOLTS ALTERNATING CURRENT
CONT.....CONTINUOUS	MIN.....MINIMUM	VAR.....VARIES, VARIABLE
CPS.....CYCLES PER SECOND	MISC.....MISCELLANEOUS	VDC.....VOLTS DIRECT CURRENT
CR.....CIRCUIT RELAY	MLO.....MAIN LUGS ONLY	VENT.....VENTILATION
DC.....DIRECT CURRENT	N.....NEUTRAL	VIF.....VERIFY IN FIELD
DET.....DETAIL	NA.....NOT APPLICABLE	W.....WITH
DIA.....DIAMETER	NBS.....NATIONAL BUREAU OF STANDARDS	W/O.....WITHOUT
DN.....DOWN	NC.....NORMALLY CLOSED	WL.....WATER LEVEL
DPDT.....DOUBLE POLE DOUBLE THROW	NEG.....NATIONAL ELECTRICAL CODE	WP.....WATER PROOFING
DPST.....DOUBLE POLE SINGLE THROW	NEMA.....NAT. ELECTRICAL MFG. ASSOC.	
DWG.....DRAWING	NO.....NORMALLY OPEN	
EA.....EACH	NTS.....NOT TO SCALE	
	OC.....ON CENTER	

Electrical Abbreviations  
Scale: None

- CHECK ALL APPLICABLE ELECTRICAL CODES, BEFORE INSTALLING
- CAUTION: THE INSTALLATION AND OPERATION OF ELECTRICAL PRODUCTS UNDERWATER, PRESENTS A POTENTIALLY HAZARDOUS CONDITION, UNLESS THE WORK IS CARRIED OUT BY QUALIFIED LICENSED PERSONNEL IN A CAREFUL AND PROFESSIONAL MANNER AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL SAFETY REGULATIONS AND IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.
- THE NATIONAL ELECTRICAL CODE (NEC) REQUIRES THE USE OF A CLASS "A" GROUND FAULT CIRCUIT INTERRUPTER (GFCI) ON EACH SUBMERSIBLE EQUIPMENT CIRCUIT ABOVE 15 VOLTS AND THE USE OF A LOW WATER CUTOFF IN EACH SEPARATE BODY OF WATER WHERE EQUIPMENT WHICH DEPENDS UPON SUBMERSION FOR SAFE OPERATION IS PRESENT. USE "THIN" COPPER WIRE WITH A NEUTRAL FOR EACH CIRCUIT PLUS A GROUND WIRE. SEE "NEC" SECTION 680 FOR GROUND DETAILS.
- ANY LIGHTING FIXTURE POINTING UPWARDS MUST HAVE THE LENS ADEQUATELY GUARDED TO PREVENT CONTACT BY ANY PERSON. "NEC" SECTION 680.
- A LOW - WATER CUTOFF IS REQUIRED BY "NEC" 680 TO PROTECT UNDERWATER LIGHTS AND ALL SUBMERSIBLE PUMPS FROM OVERHEATING
- UNDERWATER JUNCTION BOXES ARE REQUIRED BY "NEC" 680 TO BE FILLED WITH A POTTING COMPOUND TO PREVENT ENTRY OF MOISTURE. FILL WITH COMPOUND PRIOR TO FILLING POOL, AND AFTER ALL CIRCUITS HAVE BEEN CHECKED. (SEE IMPORTANT INSTRUCTIONS FOR SUBMERSIBLE JUNCTION BOXES).
- ALL CONDUIT STUBBED UP THROUGH THE POOL FLOOR MUST BE OF RED BRASS PIPE, OR "EVERDUR" TYPE METALLIC CONDUIT, APPROVED FOR THIS PURPOSE.
- USE A GOOD QUALITY THREAD SEALANT FOR ALL CONDUIT CONNECTIONS, AND PRESSURE TEST THE CONDUIT SYSTEM TO ELIMINATE ALL LEAKS.
- THE CONTRACTOR IS TO VERIFY ALL FIELD DIMENSIONS THAT MIGHT BE CRITICAL OR AFFECT FOUNTAIN PERFORMANCE, SUCH AS ALL DIMENSIONS REFERENCED TO WATER LEVEL.
- PULL CORRECT QUANTITY AND SIZE OF WIRES, WITH SEPARATE GROUND, THROUGH CONDUIT. MAKE ALL SPLICES AND CONNECTIONS TIGHT AND WELL INSULATED.
- INSERT EACH SUBMERSIBLE CORD THROUGH THE BRASS CORD SEALS PROVIDED AND TIGHTEN SECURELY.
- CONNECT THE GREEN WIRE TO THE GROUND LUG IN THE JUNCTION BOX, THIS IS THE SAFETY GROUND FOR THE EQUIPMENT.
- DO NOT OPERATE SUBMERSIBLE LIGHTING FIXTURES MORE THAN 10 SECONDS UNLESS COMPLETELY SUBMERGED, OR DAMAGE WILL RESULT.
- NOT USED.
- ADEQUATE VENTILATION MUST BE PROVIDED IN THE EQUIPMENT AREA SUFFICIENT TO PREVENT EQUIPMENT OVERHEATING AND/OR OXIDATION.
- ADEQUATE DRAINAGE MUST BE PROVIDED IN THE EQUIPMENT AREA TO PREVENT FLOODING OF THE EQUIPMENT.
- ALL EQUIPMENT, MATERIALS AND DEVICES MUST BEAR THE UNDERWRITERS LABORATORIES, INC. (UL) LABEL (OR SHALL BE LISTED WITH U.L.).
- PROVIDE A GROUNDING ELECTRODE SYSTEM, IN ACCORDANCE WITH "NEC" ARTICLE 250.
- ALL EXPOSED, NON-CURRENT CONDUCTING METALLIC PARTS OF ANY ELECTRICAL EQUIPMENT, MATERIALS, ETC. SHALL BE GROUNDED IN ACCORDANCE WITH "NEC" ARTICLE 680-54 AND 680-55.
- ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURERS, AND IN ACCORDANCE WITH APPLICABLE FEDERAL AND LOCAL CODES.
- ALL CONDUIT CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH DIELECTRIC FITTINGS.

Electrical Notes  
Scale: None

ALL LAYOUT DIMENSIONS ARE FROM PLAN VIEW CALCULATIONS. ACTUAL FIELD DIMENSIONS MAY VARY FROM PLAN DUE TO ACTUAL SITE CONDITIONS OR THIRD DIMENSION DISTANCES.

ALL EXISTING CONDITIONS ARE SHOWN FOR INFORMATION ONLY.

ALL PROPOSED UTILITY INFORMATION IS SHOWN FOR REFERENCE ONLY. REFER TO THE CIVIL PLANS FOR CONFIRMATION.

THESE DRAWINGS USE A SYSTEM OF KEYNOTES, SYMBOLS, AND ABBREVIATIONS FOR MATERIAL DESIGNATIONS AND SPECIFIC FUNCTION. THE CONTRACTOR SHALL BE FAMILIAR WITH THESE ITEMS PRIOR TO COMMENCING WORK. CONTACT THE ARCHITECT OR CIVIL ENGINEER IF ANY CONFLICTS ARE FOUND.

ALL SYMBOLS ARE SHOWN DIAGRAMMATIC, ILLUSTRATING THE APPROXIMATE LOCATION OF EXISTING AND PROPOSED MATERIALS. ANY DISCREPANCIES OR CONFLICTS BETWEEN EXISTING AND PROPOSED CONDITIONS SHALL BE REPORTED TO THE ARCHITECT OR CIVIL ENGINEER PRIOR TO PERFORMING WORK.

REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION PERTAINING TO THE PROJECT MATERIALS, PROCEDURES, AND INSTALLATION.

WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED BUILT CONDITIONS. ALL BRACING, TEMPORARY SUPPORTS, AND SHORING NECESSARY FOR CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

DIMENSIONS MARKED "VERIFY" ARE TO BE FIELD MEASURED. ANY DISCREPANCIES FROM THE NOTED DIMENSION ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR CIVIL ENGINEER PRIOR TO CONTINUING WORK.

ALL ARCHITECTURAL INFORMATION IS SHOWN FOR REFERENCE ONLY. REFER TO THE ARCHITECTURAL DRAWINGS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

REFER TO THE CIVIL DRAWINGS FOR ALL UNDERGROUND DRAINAGE, INLET, AND UTILITY LOCATIONS, ELEVATIONS, AND DETAILS. VERIFY THAT ALL UTILITIES DO NOT CONFLICT WITH PROPOSED CONSTRUCTION PRIOR TO WORK.

LAYOUT OF ARCS AND CURVES ARE TO BE SMOOTH AND CONTINUOUS. OBTAIN ARCHITECT OR CIVIL ENGINEER APPROVAL PRIOR TO ALL CONSTRUCTION.

**Dig Alert ! Call 811 on any phone.**

EXCAVATORS WILL:

- CALL US AND GIVE AT LEAST TWO WORKING DAYS NOTICE PRIOR TO EXCAVATING.
- DELINEATE (OUTLINE) THEIR JOB IN WHITE PAINT.
- HAND EXPOSE TO THE POINT OF NO CONFLICT WITHIN THE TOLERANCE ZONE.

MEMBERS WILL:

- MARK OR LOCATE THEIR LINES WITHIN TWO WORKING DAYS OF THE START OF CONSTRUCTION.
- USE THE APWA COLOR CODE TO MARK THEIR FACILITIES.
- BE ACCURATE WITHIN 24 INCHES EITHER SIDE OF THE BURIED FACILITY (TOLERANCE ZONE).

Underground Service Alert  
Call: TOLL FREE 1-800-422-4133  
TWO WORKING DAYS BEFORE YOU DIG

Construction Notes  
Scale: None

Date	
Revision	Description
1	ISSUE FOR PERMITS
2	ISSUE FOR PERMITS
3	ISSUE FOR PERMITS
4	ISSUE FOR PERMITS
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Job No.	27082.30
Date	09 APRIL 2009
Drawn by	VM
Checked by	LM
Scale	AS SHOWN
<b>FOUNTAIN ELECTRICAL SITE PLAN &amp; NOTES</b>	
<b>F0.02</b>	