

SYMBOL LEGEND

	EXISTING POLE LIGHT
	EXISTING PARKING LOT POLE LIGHT
	NEW POLE LIGHT
	NEW EMERGENCY TOWER W/PHONE AND CAMERA (PROVIDED BY OWNER)
	NEW IN-GROUND PULL BOX
	EXISTING ELECTRICAL SERVICE RACK

ABBREVIATIONS

1P	ONE POLE	FLEX	FLEXIBLE	O2	OXYGEN
2P	TWO POLE	FLR	FLOOR	OHD	OVERHEAD DOOR OPERATOR
3P	THREE POLE	FMC	FLEXIBLE METALLIC CONDUIT	P	POLE
4P	FOUR POLE	FRE	FIBERGLASS REINFORCED EPOXY FURNITURE	PB	PULL BOX
1P1W	ONE POLE, ONE WIRE	GC	GENERAL CONTRACTOR	PC	PLUMBING SYSTEM CONTRACTOR
1P2W	ONE POLE, TWO WIRE	GEN	GENERATOR	PE	PRIMARY SERVICE
2P2W	TWO POLE, TWO WIRE	GFI	GROUND FAULT INTERRUPTER	PH	PHASE
2P3W	TWO POLE, THREE WIRE	GFPE	GROUND FAULT PROTECTION EQUIP	PNL	PANEL(BOARD)
3P2W	THREE POLE, TWO WIRE	GND	GROUND	PV	POST INDICATING VALVE
3P3W	THREE POLE, THREE WIRE	GRC	GALVANIZED RIGID CONDUIT	PP	POWER PANEL
3P4W	THREE POLE, FOUR WIRE	HGT	HEIGHT	PR	PAIR
4P4W	FOUR POLE, FOUR WIRE	HP	HORSEPOWER	PRI	PRIMARY
A	AMPERE	HV	HIGH VOLTAGE	PT	POTENTIAL TRANSFORMER
AC	ABOVE COUNTER	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	PVC	POLYVINYL CHLORIDE CONDUIT
AF	AMP FRAME	HW	HOT WATER	PWR	POWER
AFCI	ARC FAULT CIRCUIT INTERRUPTER	HZ	HERTZ (CYCLES PER SECOND)	RE	REMOVE EXISTING
AFF	ABOVE FINISHED FLOOR	IAM	INDIVIDUAL ADDRESSABLE MODULE	REC	RECESSED
AFG	ABOVE FINISHED GRADE	IC	INTERCOMMUNICATION	RECP	RECEPTACLE
AHU	AIR HANDLING UNIT	ID	IDENTIFICATION	REF	RELOCATE EXISTING
AIC	AMPERE INTERRUPTING CAPACITY	IG	ISOLATED GROUND	RL	RIGID METAL CONDUIT
AL	ALUMINUM	IMC	INTERMEDIATE METAL CONDUIT	RM	ROOM
AS	AMP SWITCH	IR	PASSIVE INFRARED	RMC	RIGID METAL CONDUIT
AT	AMP TRIP	JB	JUNCTION BOX	RTU	ROOFTOP UNIT
ARCH	ARCHITECT	KCMIL	THOUSAND CIRCULAR MILS	RSC	RIGID STEEL CONDUIT
ATS	AUTOMATIC TRANSFER SWITCH	K/O	KNOCK-OUT	S	SURFACE MOUNTED
AUD	AUDIOMETER BOX CONNECTION	KVA	KILOVOLT AMPERE	SCH	SCHEDULE
AUX	AUXILIARY	KVAR	KILOVOLT AMPERE REACTIVE	SD	SMOKE DAMPER
A/V	AUDIO VISUAL	KW	KILOWATT	SE	SECONDARY ELECTRIC SERVICE
AWG	AMERICAN WIRE GAUGE	LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT	SEC	SECONDARY
BLDG	BUILDING	LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT	SIG	SIGNAL
C	CONDUIT	LP	LIGHTING PANEL	SN	SOLID NEUTRAL
CAM	CAMERA	LS	LIMIT SWITCH	SP	SPARE
CAT	CATALOG	LTG	LIGHTING	SPKR	SPEAKER
CATV	CABLE TELEVISION	LV	LOW VOLTAGE	SPL	SPLICE
CB	CIRCUIT BREAKER	MAINT	MAINTAINED	SS	STAINLESS STEEL
CKT	CIRCUIT	MAU	MAKE-UP AIR UNIT	STP	SHIELDED TWISTED PAIR
COL	COLUMN	MAX	MAXIMUM	STL	CARBON STEEL
C.T.	CURRENT TRANSFORMER	MBC	MAIN CIRCUIT BREAKER	SUSP	SUSPENDED
CU	COPPER	MCC	MOTOR CONTROL CENTER	SW	SWITCH
☉	CENTERLINE	MD	MOTORIZED DAMPER	SWBD	SWITCHBOARD
DC	DIRECT CURRENT	MDP	MAIN DISTRIBUTION PANEL	TC	TELEPHONE CABINET
Δ	DELTA	MISC	MISCELLANEOUS	TCI	TELECOMMUNICATIONS CABLING
DET	DETECTOR	MFR	MANUFACTURER	INST	INSTALLER
DISC	DISCONNECT	MLO	MAIN LUGS ONLY	TEMP	TEMPERATURE CONTROL PANEL
DIST	DISTRIBUTION	MOD	MOTOR OPERATED DISCONNECT SWITCH	TEL	TELEPHONE
DN	DOWN	MTD	MOUNTED	TEL/DATA	TELEPHONE/DATA
DWG	DRAWING	MTG	MOUNTING	TEMP	TEMPORARY
E	WIRED ON EMERGENCY CIRCUIT	MTS	MANUAL TRANSFER SWITCH	TERM	TERMINAL(S)
EA	EACH	N	NORTH	TV	TELEVISION
EC	ELECTRICAL CONTRACTOR	N/A	NOT APPLICABLE	TYP	TYPICAL
EF	EXHAUST FAN	NC	NORMALLY CLOSED	UC	UNDER COUNTER
ELEC	ELECTRIC(AL)	NEC	NATIONAL ELECTRICAL CODE	UG	UNDERGROUND
EMER	EMERGENCY	NF	NON-FUSED	UH	UNIT HEATER
EMT	ELECTRIC METALLIC TUBING	NIC	NOT IN CONTRACT	U.O.I.	UNLESS OTHERWISE INDICATED
ENCL	ENCLOSURE	NL	NIGHT LIGHT	UPS	UNINTERRUPTIBLE POWER SOURCE
EOL	END OF LINE	NM	NONMETALLIC SHEATHED CABLE	UTIL	UTILITY
EPO	EMERGENCY POWER OFF EQUIPMENT	NO	NORMALLY OPEN	UTP	UNSHIELDED TWISTED PAIR
EQUIP	EQUIPMENT	NRTL	NATIONALLY RECOGNIZED TESTING LAB	V	VOLT
EWC	ELECTRIC WATER COOLER	#	NUMBER	W	WYE
EWH	ELECTRIC WATER HEATER	NTS	NOT TO SCALE	W	WATT
EXIST	EXISTING			W/	WITH
F	FLUSH			WH	WATTHOUR
FA	FIRE ALARM			WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS			XFMR	TRANSFORMER
FC	FIRE PROTECTION CONTRACTOR			ZAM	ZONE ADAPTER MODULE
FCU	FAN COIL UNIT			+72	MOUNTING UNITS TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE
FDN	FOUNDATION				
FIXT	FIXTURE				
FLA	FULL LOAD AMPS				

GENERAL ELECTRICAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT INTERNATIONAL CODES AND THE REQUIREMENTS STATED IN THE APPLICABLE SECTIONS OF THE NATIONAL FIRE CODES (NFPA STANDARDS) CURRENT AT THE TIME OF CONSTRUCTION. AMENDMENTS TO THESE CODES AS SET FORTH BY THE AUTHORITY HAVING JURISDICTION SHALL SUPERSEDE THE INTERNATIONAL CODES AND NFPA STANDARDS AS ISSUED.
- INTERRELATION BETWEEN THE DRAWINGS: IN THE EVENT OF A CONFLICT BETWEEN A DETAIL AND THE SITE PLAN, THE LARGER SIZE, QUANTITY, LENGTH OR OPTIONS SHALL BE REQUIRED. IN THE EVENT OF A CONFLICT BETWEEN WHAT IS SHOWN ON THE SITE PLAN AND A KEYED NOTE, THE KEYED NOTE SHALL GOVERN. IN ALL CASES, THE ENGINEER OF RECORD SHALL BE THE INTERPRETER OF THE DOCUMENTS.
- PRIOR TO BIDDING, THE EC SHALL VISIT THE JOB SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND TO VERIFY LOCATIONS AND SIZES OF EXISTING EQUIPMENT, CONDUCTORS, ETC. SUBMITTAL OF A BID SHALL SIGNIFY WILLINGNESS TO COMPLY WITH THE CONSTRUCTION DOCUMENTS AND ACCEPTANCE OF ON-SITE CONDITIONS AS THEY EXIST.
- THE EXISTENCE AND LOCATION OF UTILITIES, MECHANICAL SYSTEMS, ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING WORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK.
- COOPERATE FULLY WITH SEPARATE CONTRACTORS SO WORK ON THOSE CONTRACTS MAY BE CARRIED OUT SMOOTHLY, WITHOUT INTERFERING WITH OR DELAYING WORK UNDER THIS CONTRACT. COORDINATE THE WORK OF THIS CONTRACT WITH WORK PERFORMED UNDER SEPARATE CONTRACTS.
- DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY THE OWNER. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A MINIMUM 72 HOUR NOTIFICATION, UNLESS OTHERWISE NOTIFIED.
- THE DRAWINGS ARE DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. NOT ALL NEC REQUIRED ITEMS SUCH AS RACEWAYS, CONDUCTORS, GROUNDING SYSTEMS, ETC. CAN BE SHOWN. FURNISH AND INSTALL RACEWAYS, CONDUCTORS, ETC. AS REQUIRED FOR A COMPLETE AND FUNCTIONAL, NEC COMPLIANT SYSTEM.
- THE INSTALLER IS RESPONSIBLE FOR COORDINATING WITH OTHER TRADES. THE INSTALLER SHALL NOT INSTALL OR FABRICATE ANY WORK SHOWN UNTIL ALL SUCH WORK IS FULLY COORDINATED. FURNISH AND INSTALL ADDITIONAL RACEWAYS, CONDUCTORS, ETC. AS REQUIRED TO COORDINATE THE INSTALLATION WITH OTHER TRADES AS PART OF THE WORK.
- TAKE FIELD MEASUREMENTS AS REQUIRED TO FIT THE WORK PROPERLY. RECHECK MEASUREMENTS BEFORE INSTALLING EACH PRODUCT. WHERE PORTIONS OF THE WORK ARE INDICATED TO FIT TO OTHER CONSTRUCTION, VERIFY DIMENSIONS OF OTHER CONSTRUCTION BY FIELD MEASUREMENTS BEFORE FABRICATION. COORDINATE FABRICATION SCHEDULE WITH CONSTRUCTION PROGRESS TO AVOID DELAYING THE WORK. FURNISH AND INSTALL ADDITIONAL RACEWAYS, CONDUCTORS, ETC. AS REQUIRED TO ACCOMMODATE FIELD CONDITIONS AS PART OF THE WORK.
- THE WORK SHALL BE SUPERVISED BY A MASTER ELECTRICIAN TO ASSURE THAT ALL WORK IS INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND THE CONSTRUCTION DOCUMENTS.
- A CIRCUIT SHALL BE DEFINED TO INCLUDE ALL OF THE FOLLOWING: CONDUIT, CONDUCTORS, BOXES, WIRING DEVICES, COVERPLATES, WIREWAYS, ETC.
- MINIMUM SIZE FOR BRANCH CIRCUITS IS #12AWG CONDUCTORS AND 0.75" CONDUIT UNLESS OTHERWISE NOTED.
- MULTIWIRE BRANCH CIRCUITS AS DEFINED BY THE NATIONAL ELECTRICAL CODE SHALL NOT BE USED. A DEDICATED NEUTRAL CONDUCTOR SHALL BE RUN FOR EACH BRANCH CIRCUIT, UNLESS OTHERWISE NOTIFIED.

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 TEXAS REGISTERED ENGINEERING FIRM # 1004000



Hector C. Hinojosa
 10-02-15

CITY OF WINDCREST
 BROOK FALLS PARK
 WINDCREST, TX 78239

ELECTRICAL SYMBOLS, ABBREVIATIONS, NOTES

JOB: 2515COW00.001

DATE: 09/29/2015

DRAWN: DJB TDS PM:

DESIGN: HGH TDS DM:

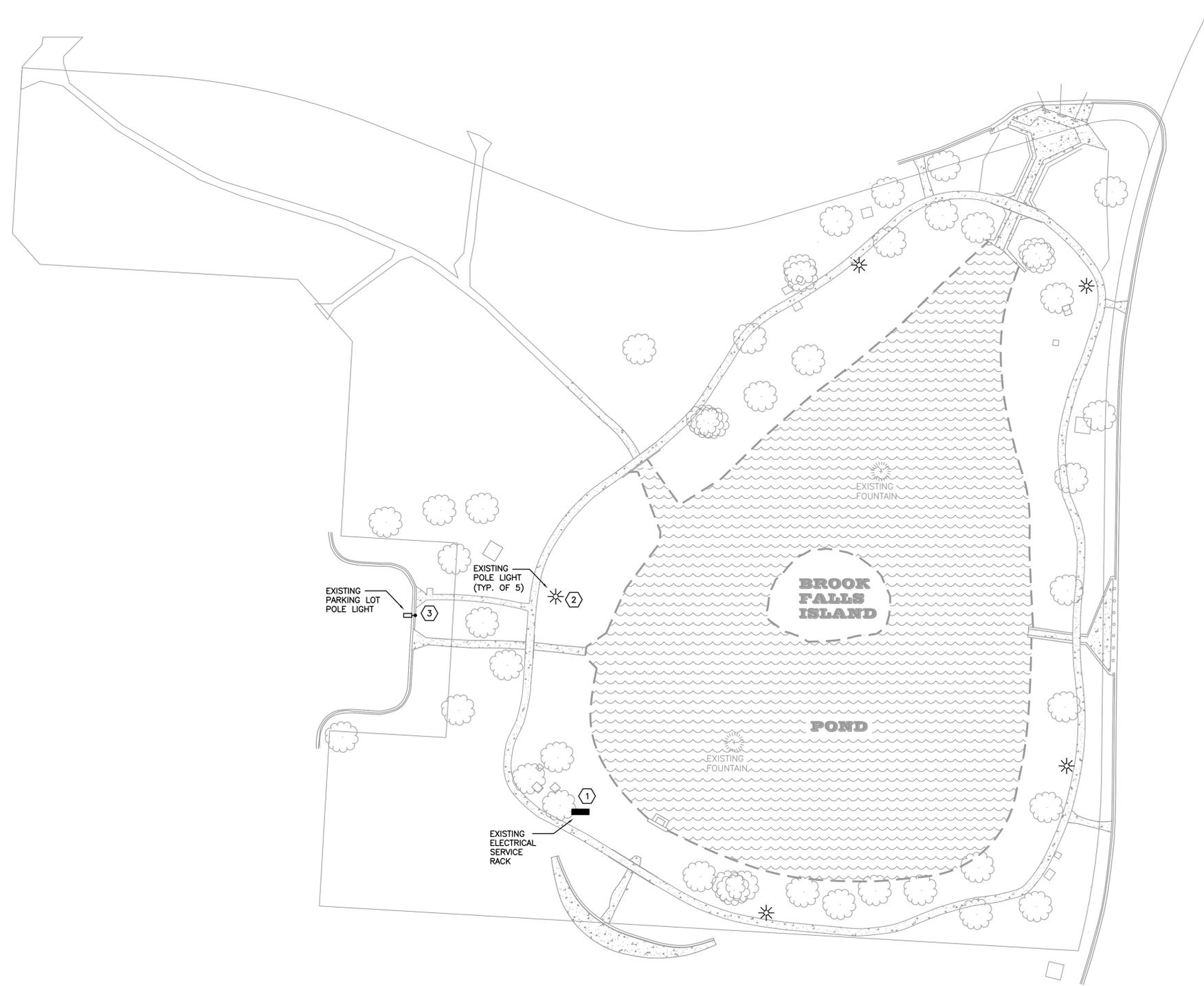
PEER: --- HGH OTHER:

REVISIONS:

DELTA	DESCRIPTION
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SHEET:

E1.1



1 ELECTRICAL DEMO PLAN
Scale: 1" = 30'

GENERAL NOTES

1. LOCATION OF EXISTING EQUIPMENT ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES OR STRUCTURES PRIOR TO BEGINNING EXCAVATION AND TRENCHING.
2. CONTRACTOR SHALL DEMOLISH ALL CONCRETE POLE BASE FOUNDATIONS REMAINING AFTER REMOVAL OF EXISTING POLE LIGHTS.
3. CONTRACTOR SHALL REMOVE ANY UNUSED CONDUIT EMERGING OUT OF GROUND DOWN TO DEPTH OF 18" BELOW GRADE OR AT DEPTH OF WHERE CONDUIT RUNS HORIZONTALLY BELOW GRADE.

DEMO PLAN LEGEND

- * EXISTING POLE LIGHT.
- ◻ EXISTING PARKING LOT POLE LIGHT.

KEYED NOTES

1. EXISTING ELECTRICAL SERVICE EQUIPMENT TO REMAIN. REFER TO 1/E4.1 FOR REQUIRED UPGRADING OF EXISTING EQUIPMENT.
2. DEMOLISH (5) EXISTING POLE LIGHTS AND REMOVE ASSOCIATED CIRCUIT CONDUCTORS BACK TO PANEL.
3. REMOVE AND RELOCATE EXISTING POLE LIGHT. REFER TO 1/E2.1 FOR NEW LOCATION.



Hector C. Hinojosa
10-02-15

**CITY OF WINDCREST
BROOK FALLS PARK
WINDCREST, TX 78239
ELECTRICAL DEMO PLAN**

JOB: 2515COW00.001

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ED2.1

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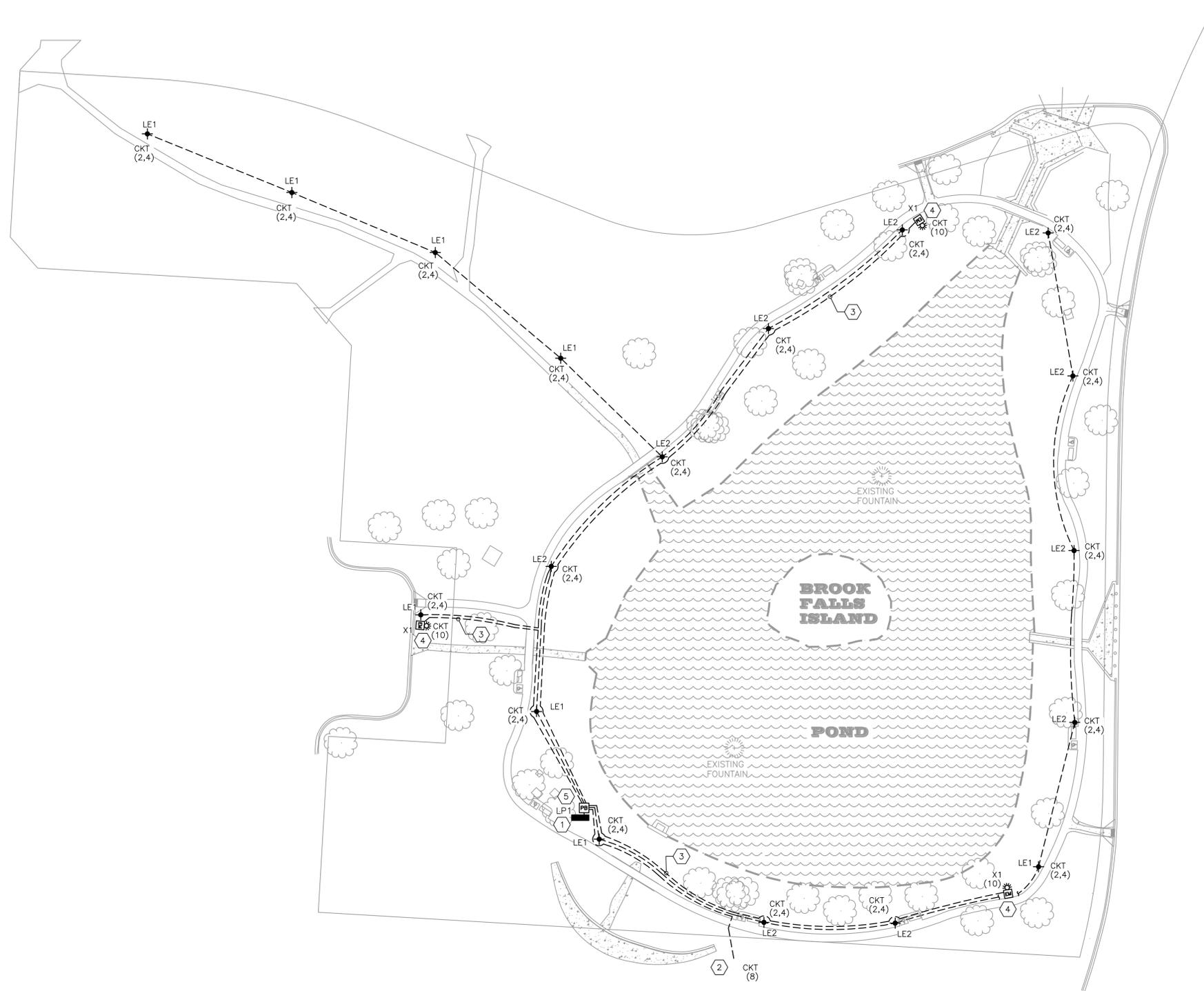
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GENERAL NOTES

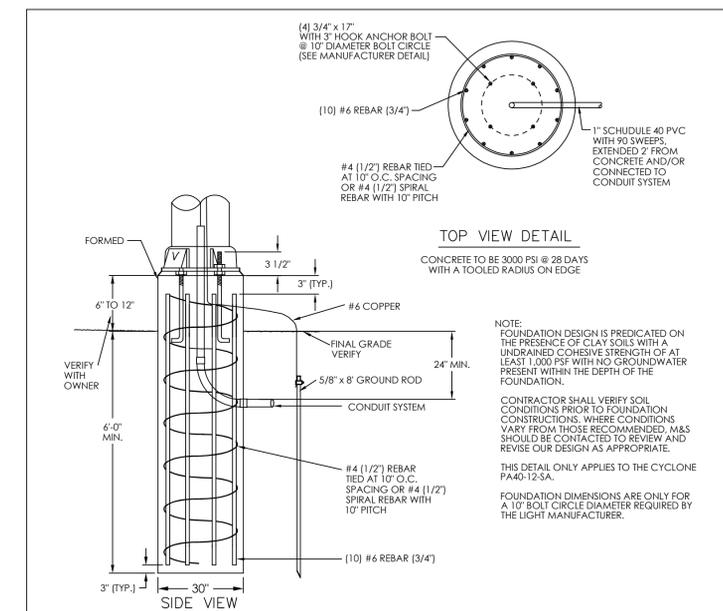
1. LOCATION OF EXISTING EQUIPMENT ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES OR STRUCTURES PRIOR TO BEGINNING EXCAVATION AND TRENCHING.
2. REFERENCE SHEET E1.1 FOR LEGENDS SYMBOLS, ABBREVIATIONS AND FURTHER GENERAL NOTES.
3. REFERENCE SHEET E4.1 FOR ELECTRICAL SERVICE ELEVATION PLAN, LIGHTING FIXTURE SCHEDULE, AND ELECTRICAL SCHEDULE.
4. PROVIDE CONCRETE PAD AS PER MANUFACTURER'S INSTRUCTIONS FOR EMERGENCY TOWER.
5. PROVIDE CONCRETE POLE BASES FOR POLE LIGHTS. RE: DETAIL 2/E2.1.
6. MINIMUM SIZE FOR UNDERGROUND BRANCH CIRCUITS IS #12 THWN AND 3/4" PVC, UNLESS OTHERWISE NOTED.
7. MINIMUM COVER FOR CONDUIT INSTALLED UNDERGROUND IS 18" BETWEEN TOP OF CONDUIT AND TOP SURFACE OF FINISH GRADE.

KEYED NOTES (#)

1. REMOVE AND REPLACE EXISTING PANEL AND CIRCUIT BREAKERS WITH NEW PANEL "LP1". RE: 1/E4.1.
2. RELOCATE EXISTING PARKING LOT POLE LIGHT TO THIS LOCATION.
3. RUN (1) 1"Ø WITH DIRECT BURIAL FOUR STRAND MULTI-MODE FIBER OPTIC CABLE AND (3) 1"Ø WITH (2)#10, (1)#10Ø TO EMERGENCY TOWER. RE: 1/E4.1 FOR TERMINATION OF FIBER OPTIC CABLE AT ELECTRICAL SERVICE RACK.
4. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF EMERGENCY TOWER WITH CITY OF WINDCREST CHIEF OF POLICE PRIOR TO BEGINNING WORK.
5. PROVIDE 24X36 UNDERGROUND PULL BOX W/DIVIDER, QUAZITE PART# PG2436BA18, 2 PIECE COVER PG2436CS00 (OR EQUAL) W/ "ELECTRIC" ON ONE COVER AND "FIBER OPTICS" ON THE OTHER.



1 ELECTRICAL LIGHTING PLAN
Scale: 1" = 30'



2 STRUCTURAL LIGHT POLE BASE FOR CITY OF WINDCREST, TX (FOR REFERENCE ONLY)
SCALE: N.T.S.

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ELECTRICAL LIGHTING PLAN

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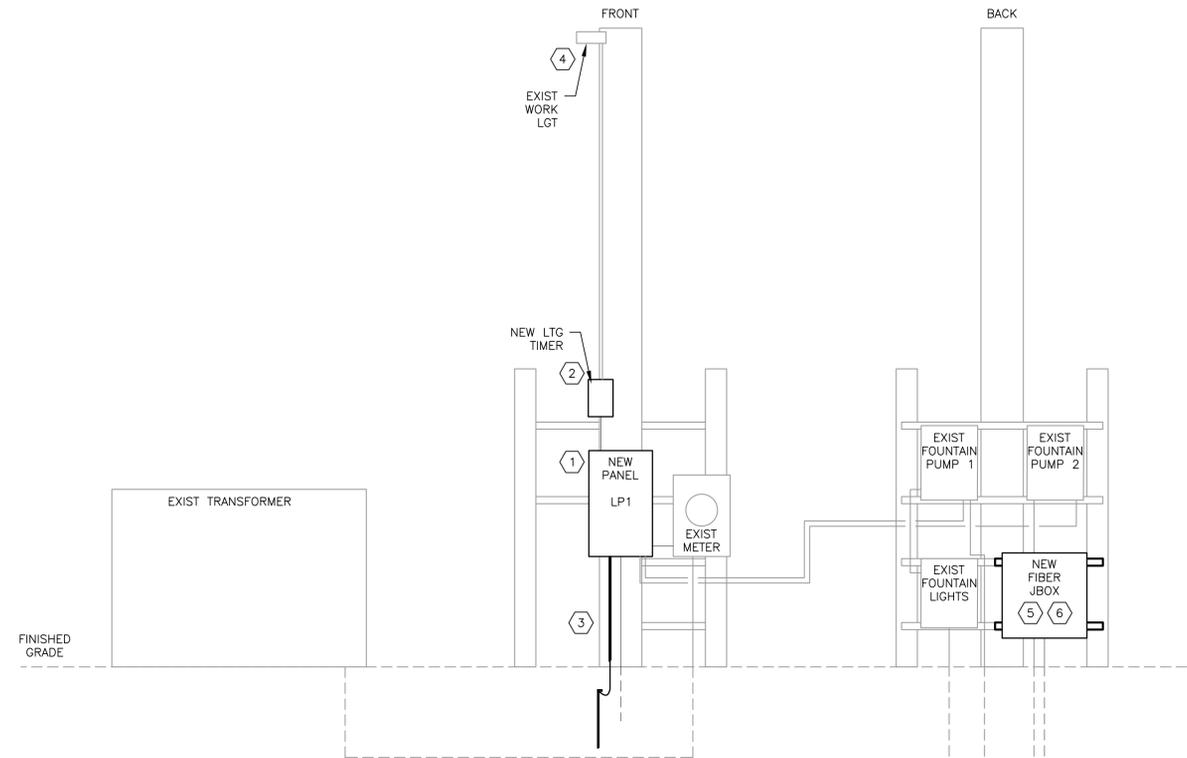
SHEET:
E2.1

GENERAL NOTES

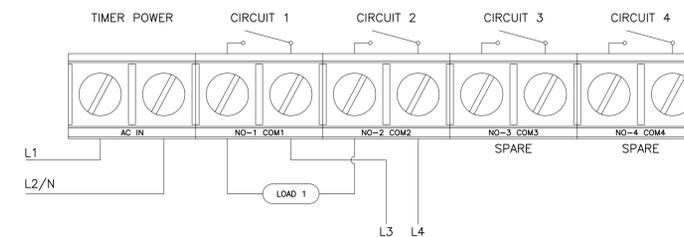
- REFERENCE SHEET E1.1 FOR LEGENDS SYMBOLS, ABBREVIATIONS AND FURTHER GENERAL NOTES.

KEYED NOTES

- DEMOLISH EXISTING CIRCUIT PANEL. INSTALL NEW CIRCUIT PANEL WITH NEW CIRCUIT BREAKERS.
- DEMOLISH EXISTING LIGHTING TIMER. INSTALL NEW INTERMATIC ASTRONOMICAL TIME SWITCH CAT# ET2845CP.
- CONTRACTOR SHALL INSPECT EXISTING SYSTEM GROUNDING AND BRING ANY DEFICIENCIES UP TO CURRENT NATIONAL ELECTRICAL CODE ADOPTED BY THE CITY OF WINDCREST.
- EXISTING LIGHT TO REMAIN, REROUTE POWER AS REQUIRED.
- PROVIDE NEMA TYPE 4 36X30X12 JBOX HOFFMAN CAT# A36H30DLP3PT OR EQUAL. VERIFY ACTUAL SIZE OF ENCLOSURE REQUIRED FOR FIBER MEDIA CONVERTER EQUIPMENT WITH INTERNET SERVICE PROVIDER AND MODIFY SPECIFIED SIZE AS NEEDED.
- LEAVE 20' SERVICE LOOP FOR EACH FIBER CABLE.



1 EXISTING ELECTRICAL SERVICE ELEVATION PLAN
Scale: N.T.S.



TIMER CONFIGURATION FOR ONE 208/240 VAC DPST AND TWO SPARES
OUTPUT CONFIGURATION: SIMULTANEOUS - CIRCUIT 1 AND CIRCUIT 2 PER INTERMATIC INSTALL GUIDE

2 TIMER WIRING CONFIGURATION
Scale: N.T.S.

VOLTAGE: 240/120V		PANEL NAME: EXIST LP1		MOUNT: SURFACE			
PHASE: 1		MINIMUM PANEL RATING: 125 A		NEMA STYLE: ---			
WIRE: 3		MAINS TYPE: ---		BUS MATERIAL: COPPER			
		MINIMUM SCCR: --k AIC					
		FED FROM:					
CIRCUIT	DESCRIPTION	BRKR.	A	B	BRKR.	DESCRIPTION	CIRCUIT
1	NOT USED	20				NOT USED	2
3	NOT USED					NOT USED	4
5	NOT USED					NOT USED	6
7	PARKING	20				NOT USED	8
9, 11	FAR PUMP	20	EXIST LOAD	EXIST LOAD	20	SPARE / SPARE	10
13	POLE LTG / TIMER	20	EXIST LOAD	EXIST LOAD	20	NEAR PUMP	12, 14
		POLE TOTAL		-		POLE TOTAL	
NOTES:		TOTAL LOAD		NOTES:			
EXISTING PANEL LAYOUT SHOWN HERE FOR REFERENCE ONLY		- VA					
		- KVA					
		- AMPS					

VOLTAGE: 240/120V		PANEL NAME: NEW LP1		MOUNT: SURFACE			
PHASE: 1		MINIMUM PANEL RATING: 125 A		NEMA STYLE: TYPE 3R			
WIRE: 3		MAINS TYPE: 100A MCB		BUS MATERIAL: COPPER			
		MINIMUM SCCR: 10 k AIC					
		FED FROM:					
CIRCUIT	DESCRIPTION	BRKR.	A	B	BRKR.	DESCRIPTION	CIRCUIT
1, 3	NEAR PUMP	20	EXIST LOAD 774	EXIST LOAD 774	20	LIGHTING	2, 4
5, 7	FAR PUMP	20	EXIST LOAD	EXIST LOAD	20	TIMER	6
9	SPARE	20		EXIST LOAD	EXIST LOAD	PARKING LIGHT	8
11	SPARE	20	900		20	EMERGENCY TOWER PHONE	10
13	SPARE	20			20	SPARE	12
15	SPARE	20			20	SPARE	14
17	SPARE	20			20	SPARE	16
19	SPARE	20			20	SPARE	18
21	SPARE	20			20	SPARE	20
		POLE TOTAL		-		POLE TOTAL	
NOTES:		TOTAL LOAD		NOTES:			
INSTALL NEW CIRCUIT BREAKERS		- VA					
		- KVA					
		- AMPS					

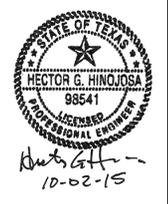
TYPE	QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING	VOLTS	LAMP TYPE	WATTS	CCT	NOTES
LE1	8	LED POLE MOUNTED POST-TOP, TYPE 5	PHILIPS HADCO	80-C-D-1-A-5-H-3000K-A-DB P1B50-126-A POLE	POLE @ 12'-6" AFG	240 V	7000LM LED 70+ CRI	86 W	3000 K	-
LE2	10	LED POLE MOUNTED POST-TOP, TYPE 3	PHILIPS HADCO	80-C-D-1-A-3-H-3000K-A-DB P1B50-126-A POLE	POLE @ 12'-6" AFG	240 V	7000LM LED 70+ CRI	86 W	3000 K	1
X1	3	EMERGENCY TOWER PHONE WITH DOME CAMERA	RATH SECURITY	2100-TPC3 7476 TOWER MOUNTING HARDWARE 7600 FRONT CAMERA 7600PTZ IP PTZ DOME CAMERA RF7300650SM FIBER MEDIA CONVERTER RF650Q10 NETWORK SWITCH	--	120 V	-	--	-	2

- Notes
- ORIENT LUMINAIRE TO ILLUMINATE THE CLOSEST SIDEWALK.
 - TO BE PROVIDED BY OWNER.

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ELECTRICAL SCHEDULES

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