

GENERAL ELECTRICAL NOTES	ABBREVIATIONS	LIGHTING PLAN LEGEND	POWER PLAN LEGEND
<p>1. THE ELECTRICAL WORK IS SUBJECT TO ALL OF THE PURCHASER'S TERMS, CONDITIONS AND SPECIFICATIONS, INCLUDING WORKMANSHIP.</p> <p>2. GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION" (ANSI).</p> <p>3. IT IS THE INTENT OF THESE ELECTRICAL DRAWING SHEETS TO CALL FOR FINISHED WORK; TESTED, AND READY FOR OPERATION. FOR THE ELECTRICAL WORK, "PROVIDE" IS AN ALL-INCLUSIVE TERM REQUIRING CONTRACTOR TO PROCURE, FABRICATE, FURNISH, INSTALL, MOUNT, WIRE, CONNECT AND SUPPLY ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE WORK TO THE ACCEPTANCE OF THE OWNER AND THE AUTHORITY HAVING JURISDICTION (AHJ).</p> <p>4. ALL MATERIAL PROVIDED BY THE CONTRACTOR SHALL BE NEW AND FREE OF DEFECTS, LISTED/LABELED FOR THE INTENDED PURPOSE BY UNDERWRITERS LABORATORY (UL) OR OTHER ORGANIZATION THAT IS ACCEPTABLE TO THE AHJ.</p> <p>5. ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE NOTED.</p> <p>6. CONTRACTOR SHALL INSPECT SITE FOR FIELD VERIFICATION OF ALL ASPECTS OF THE WORK PRIOR TO BIDDING.</p> <p>7. ALL DISCREPANCIES ON DRAWING SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO SUBMISSION OF BIDS. CONTRACTORS SUBMISSION OF A BID CONSTITUTES ACCEPTANCE OF ALL CONDITIONS INCLUDING FIELD CONDITIONS.</p> <p>8. THE CONTRACTOR SHALL OBTAIN AND FURNISH ALL REQUIRED PERMITS AND ARRANGE FOR ALL REQUIRED INSPECTIONS. THE CONTRACTORS BID SHALL INCLUDE COST OF ALL REQUIRED PERMITS AND FEES, INCLUDING UTILITY FEES.</p> <p>9. THE ELECTRICAL SHEETS ARE DIAGRAMMATICAL IN NATURE AND INDICATE THE GENERAL LOCATION OF OUTLETS, EQUIPMENT, AND THE CIRCUIT ARRANGEMENT OF THE REQUIRED WIRING. ALTHOUGH THE DRAWINGS DO NOT NECESSARILY INDICATE THE ACTUAL ROUTES OF CONDUITS, WHERE INDICATED, THEY SHALL BE FOLLOWED AS CLOSELY AS PROPER COORDINATION WITH THE WORK OF OTHER TRADES AND SPACE WILL PERMIT. WHERE CONDUIT RUNS ARE NOT SHOWN ON THE DRAWINGS, COORDINATE CONDUIT RUNS WITH THE WORK OF OTHER TRADES AND STRUCTURE, SIMPLY INSTALLATION WHEREVER POSSIBLE, BUT SUBJECT TO APPROVAL BY THE ARCHITECT FOR VISUAL AND STRUCTURAL REASONS. IT IS NOT WITHIN THE SCOPE OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, BENDS, PULL BOXES, AND OBSTRUCTIONS. THE DRAWINGS ARE NOT INTENDED TO BE SCALED. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS. IN CASE OF DISCREPANCY BETWEEN ELECTRICAL AND ARCHITECT SHEET SET FOR MOUNTING ELEVATIONS OR REFLECTED CEILINGS, FOLLOW ARCHITECT SHEETS.</p> <p>10. MAINTAIN ON THE JOB SITE, IN GOOD CONDITION, ONE SET OF UP-TO-DATE ELECTRICAL DRAWINGS. PROGRESSIVELY, NEATLY, LEGIBLY, AND EXACTLY RECORD ON THESE DRAWINGS THE LOCATION OF ALL CONCEALED CONDUIT RUNS AND ALL WORK WHICH IS INSTALLED DIFFERENTLY THAN IN THE LOCATION AND MANNER INDICATED ON THE DRAWINGS. ON COMPLETION OF THE WORK, THE DRAWINGS SHALL BE TURNED OVER TO THE ARCHITECT FOR APPROVAL AND POSSESSION AS A PERMANENT AND COMPLETE RECORD DOCUMENT OF THE ELECTRICAL WORK.</p> <p>11. WHEN FOLLOWED BY THE PHRASE "OR EQUAL", SPECIFIC MANUFACTURERS PRODUCTS ARE USED AS A BASIS OF DESIGN. ALTERNATE PRODUCT MAY BE PROVIDED IF APPROVED "AS EQUAL" BY THE ENGINEER OF RECORD AND THE AHJ.</p> <p>12. FOR ALL ELECTRICAL & COMMUNICATIONS DEVICES AND CIRCUITS, CONTRACTOR SHALL FIELD VERIFY WITH OWNER AND COORDINATE WITH ALL OTHER TRADES FINAL LOCATION(S) PRIOR TO ROUGH IN.</p> <p>13. PRIOR TO FINAL ACCEPTANCE, CLEAN ALL SWITCHES, CABINETS, DEVICE PLATES, FIXTURES, AND OTHER ITEMS FURNISHED UNDER THIS CONTRACT AND ENSURE THAT ALL PANEL BOARD DIRECTORIES ARE IN PLACE AND COMPLETED OR REVISED AS REQUIRED BY THE WORK, AND THAT ALL MARKING AND IDENTIFICATION OF ALL EQUIPMENT, JUNCTION BOXES, AND OTHER ITEMS IS COMPLETED. REPAIR OR REPLACE, AS DIRECTED BY THE OWNER, ANY ITEMS DAMAGED DUE TO INSTALLATION OR RELOCATION OF EQUIPMENT OR DEVICES AT NO ADDITIONAL COST TO THE OWNER.</p> <p>14. UPON THE COMPLETION OF THE WORK, THE ENTIRE ELECTRICAL SYSTEM SHALL BE TESTED AND SHALL BE SHOWN TO BE IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL SYSTEMS READY FOR OPERATION AND TO HAVE AN ELECTRICIAN AVAILABLE TO OPERATE SAME IN ACCORDANCE WITH OR UNDER THE SUPERVISION OF THE ARCHITECT/ENGINEER AND OR AHJ. THE CONTRACTOR SHALL BE AVAILABLE TO ASSIST IN REMOVAL OF PANEL FRONTS, ETC. TO PERMIT INSPECTION AS REQUIRED.</p> <p>15. ALL WORK SHALL MEET OR EXCEED THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, NATIONAL ELECTRIC CODE (NFPA 70), LOCAL ORDINANCES AND THE AUTHORITY HAVING JURISDICTION.</p> <p>16. FLEXIBLE CONDUIT INSTALLED OUT OF DOORS, IN ANY MECHANICAL EQUIPMENT ROOM, OR IN NORMALLY WET AREAS SHALL BE LIQUID TIGHT FLEX WITH SUITABLE FITTINGS.</p> <p>17. COORDINATE WITH ALL MECHANICAL TRADES FOR SPACE REQUIREMENTS IN MECHANICAL ROOMS, CORRIDORS, SHAFTS, ABOVE CEILING, ETC. THIS INCLUDES SPACE ABOVE PANELS WHERE DUCTS AND PIPING ARE PROHIBITED.</p> <p>18. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT, SEE MECHANICAL PLANS.</p> <p>19. PROVIDE CONDUIT EXPANSION FITTINGS WITH BONDING JUMPERS FAR ALL CONDUITS PASSING THROUGH EXPANSION JOINTS.</p> <p>20. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT.</p> <p>21. ALL RECEPTACLES BESIDE SINKS SHALL BE LOCATED AT LEAST 6" HORIZONTALLY FROM THE TOWEL DISPENSER. UNDER NO CONDITION SHALL A RECEPTACLE BE LOCATED UNDER A TOWEL DISPENSER.</p> <p>22. CONTRACTOR SHALL VERIFY AND COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES MOUNTED IN CASEWORK OR IN OR ABOVE COUNTERS WITH EXISTING EQUIPMENT AND EQUIPMENT FURNISHED.</p>	<p>A AMPERE AF AMPERE FRAME AFCI AVAILABLE FAULT CURRENT AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AHU AIR HANDLER UNIT (HVAC) AHJ AUTHORITY HAVING JURISDICTION AIC AMPERE INTERRUPTING CAPACITY AT AMPERE TRIP AWG AMERICAN WIRE GAUGE BKR BREAKER C CONDUIT OR CONDUCTOR CB CIRCUIT BREAKER CEILING CLG CONDUIT ONLY CO CONTROL POWER TRANSFORMER CPT CONDENSING UNIT (HVAC), COPPER CU DISCONNECT (SAFETY) SWITCH DS EMPTY CONDUIT EC EXHAUST FAN EF EMERGENCY LIGHT (UNSWITCHED) EL ELECTRICAL, ELECTRIC ELE EMERGENCY EMT ELECTRICAL METALLIC TUBING ENT ELECTRICAL NONMETALLIC TUBING EWH ELECTRIC WATER HEATER EX EXISTING FBC FLORIDA BUILDING CODE FDS FUSED DISCONNECT (SAFETY) SWITCH FLOUR FLOUR FMC FLEXIBLE METAL CONDUIT FMT FLEXIBLE METAL TUBING GND GROUND (ELECTRICAL) GEN GENERATOR GFI GROUND FAULT INTERRUPTER GWH GAS WATER HEATER HND HAND HOLE HI HIGH INTENSITY DISCHARGE LIGHT HP HORSE POWER HPS HIGH PRESSURE SODIUM LIGHT HZ HERTZ (ELECTRICAL) ICCB INSULATED CASE CIRCUIT BREAKER IG ISOLATED GROUND IMC INTERMEDIATE METAL CONDUIT JB JUNCTION BOX KCMIL THOUSAND CIRCULAR MILS KVA KILOVOLT-AMPERE KW KILOWATT KWH KILOWATT-HOUR LGT LIGHT, LIGHTING LTM LIQUIDTIGHT FLEXIBLE METAL CONDUIT LFNC LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER MCCB MOLDED CASE CIRCUIT BREAKER MDP MAIN DISTRIBUTION PANEL MH METAL HALIDE LIGHT, MAN HOLE MLO MAIN LUGS ONLY N, NEUT NEUTRAL (ELECTRICAL) NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSN. NFPA NATIONAL FIRE PROTECTION ASSOCIATION NL NIGHT LIGHT P POLE PB PULL BOX PCB POWER CIRCUIT BREAKER PH PHASE (ELECTRICAL) PNL PANEL PNLB PANELBOARD PVC PLASTIC CONDUIT PWR POWER (ELECTRICAL) RCPT RECEPTACLE RMC RIGID METAL CONDUIT RNC RIGID NONMETALLIC CONDUIT RTU ROOF TOP UNIT (HVAC) SD SMOKE DETECTOR SF SUPPLY FAN SH SHIELDED SW SWITCH SWBD SWITCHBOARD TEL TELEPHONE TIB TELEPHONE TERMINAL BOARD UG UNDERGROUND UL UNDERWRITERS LABORATORY UPS UNINTERRUPTIBLE POWER SUPPLY UNLESS OTHERWISE NOTED V, VAC VOLT, VOLT AC W WATT WP WEATHERPROOF XFMR POWER TRANSFORMER</p> <p>NOT ALL ABBREVIATIONS ARE USED IN EVERY DESIGN</p>	<p>SYMBOL: DESCRIPTION:</p> <p> LED FIXTURE. UPPER CASE LETTER DENOTES FIXTURE TYPE. REFER TO "LIGHTING FIXTURE SCHEDULE" FOR FIXTURE SPECIFICATIONS AND MOUNTING. CIRCUIT CONDUIT OR SIDE NUMBERING DESIGNATES WHICH PANEL BOARD/CIRCUIT FIXTURES ARE CONNECTED TO. (TYPICAL FOR ALL LIGHTING FIXTURES)</p> <p> LED STRIP LIGHTING FIXTURE.</p> <p> CEILING MOUNTED DOWNLIGHT FIXTURE (UON IN LIGHT FIXTURE SCHEDULE)</p> <p> WALL MOUNTED LIGHTING FIXTURE.</p> <p> FULL CUT-OFF WALL MOUNTED EXTERIOR WALL FIXTURE</p> <p> STRIPED SHADING OR "NLT" DESIGNATION = NIGHT LIGHT FIXTURE SHALL BE CONNECTED AHEAD OF ANY CONTROL SOURCE ON THE SAME CIRCUIT AS THE OTHER FIXTURES IN THAT ROOM OR AREA.</p> <p> SOLID-HALF SHADING INDICATES EMERGENCY LIGHT FIXTURE. FIXTURE SHALL BE CONNECTED AHEAD OF ANY CONTROL SOURCE ON THE SAME CIRCUIT AS THE OTHER FIXTURES IN THAT ROOM OR AREA AND FIXTURE SHALL HAVE AN INTEGRAL EMERGENCY BALLAST FOR 90 MIN OF CONTINUOUS OPERATION.</p> <p> EXIT LIGHT, UNIVERSAL MOUNT AS SPECIFIED IN THE FIXTURE SCHEDULE. SHADING INDICATES FACE DIRECTION. ARROW(S) INDICATE DIRECTION OF TRAVEL. VERIFY WITH ARCHITECTURAL FOR OPTIMUM MOUNTING LOCATION AND SINGLE OR DUAL FACE. CONNECT FIXTURE TO SAME CIRCUIT AS NORMAL LIGHTING CIRCUIT IN THAT ROOM AHEAD OF ANY CONTROL DEVICE. DOUBLE ARROW INDICATES NON DIRECTIONAL SIGN TYPICALLY PLACED OVER DOORS.</p> <p> UNIVERSAL MOUNT BATTERY OPERATED EMERGENCY LIGHT FIXTURE MOUNTED AT 8'-0" AFF UON. PROVIDE INTEGRAL EMERGENCY BATTERY FOR 90 MIN OPERATION. FIXTURE SHALL BE CONNECTED TO SAME LIGHT CIRCUIT IN ROOM AHEAD OF ANY CONTROL DEVICE FOR CONSTANT POWER. VERIFY OPTIMUM MOUNTING LOCATION IN FIELD.</p> <p> WALL SWITCH, SINGLE POLE, 125/277VAC, 20A, MOUNT 48" AFF UON.</p> <p> WALL SWITCH, THREE WAY, 125/277VAC, 20A, MOUNT 48" AFF UON.</p> <p> WALL SWITCH, DIMMER, 125/277VAC, 1500W, MOUNT 48" AFF UON.</p> <p> MANUAL MOTOR STARTER, 125/277VAC, 20A, MOUNT 48" AFF UON.</p> <p> WALL SWITCH OCCUPANCY SENSOR SWITCH, SEE OCCUPANCY SENSOR SCHEDULE FOR MORE INFORMATION, MOUNT 48" AFF UON.</p> <p> OCCUPANCY SENSOR.</p>	<p>SYMBOL: DESCRIPTION:</p> <p> DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 18" AFF UON.</p> <p> DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 42" AFF OR ABOVE COUNTER.</p> <p> DUPLEX RECEPTACLE, NEMA 5-20R, FLUSH CEILING MOUNT UON.</p> <p> QUAD RECEPTACLE, 2 OF NEMA 5-20R, MOUNT 18" AFF UON.</p> <p> SPECIAL PURPOSE OUTLET, NEMA CONFIGURATION AS SHOWN.</p> <p> DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 18" AFF UON (GROUND FAULT CIRCUIT INTERRUPTED)</p> <p> DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 42" AFF OR ABOVE COUNTER (GROUND FAULT CIRCUIT INTERRUPTED)</p> <p> JUNCTION BOX WITH BLANK PLATE; BRACKET INDICATES WALL MOUNTED.</p> <p> PANELBOARD (RECESSED FLUSH-MOUNTED UON).</p> <p> COMMUNICATIONS OUTLET BOX FOR OWNER FURNISHED VOICE AND/OR DATA. STUB 1" C. TO CEILING CAVITY AND TERMINATE WITH PLASTIC BUSHINGS. C=MOUNTED 6" ABOVE COUNTER OR BACKSPASH, W=WALL MOUNTED AT +54" AFF.</p> <p> FLOORBOX-3 GANG/3 COMPARTMENT, 1 GANG FOR POWER AND 2 GANGS FOR COMMUNICATIONS: WALKER/WIREMOLD RFB4-4DB WITH RAKMII COVERPLATE (VERIFY FLOOR COVERING AND DESIRED COVERPLATE PRIOR TO ORDERING). COORDINATE REQUIRED COMMUNICATIONS BRACKETS WITH OWNER AND PROVIDE THOSE DESIRED BRACKETS. PROVIDE (1) 1" C. AS A MINIMUM TO NEAREST WALL AND ROUTE CONDUIT UP WALL TO ACCESSIBLE CEILING CAVITY FOR EVERY FLOORBOX SHOWING COMMUNICATION OUTLETS. ACCEPTABLE SUBSTITUTIONS BY HUBBELL. FLOORBOXES MAY BE STAMPED STEEL IF NOT IN DIRECT CONTACT WITH THE EARTH. PROVIDE LAYER OF CONCRETE IF REQUIRED. OTHERWISE, IF IN DIRECT CONTACT WITH EARTH, PROVIDE CAST IRON FLOORBOXES.</p> <p> FUSED SAFETY (DISCONNECT) SWITCH TOP NUMBER = FUSE RATING, BOTTOM NUMBER = DISCONNECT RATING USE ALL RK-1 FUSES.</p> <p> SAFETY (DISCONNECT) SWITCH, NON-FUSED NUMBER = DISCONNECT RATING</p> <p> TIME CLOCK</p> <p> RELAY PANEL, BLUEBOX LT ENCLOSURE: GR140BLT ENC, SM NE1 INTERIOR: GR140BLT INT, NCL, DTC, DV</p> <p> TRANSFORMER (UTILITY)</p>
		<p>RENOVATION/DEMOLITION LEGEND</p> <p>SYMBOL: DESCRIPTION:</p> <p> EXISTING TO REMAIN.</p> <p> EXISTING TO BE REMOVED.</p> <p> EXISTING TO BE RELOCATED.</p>	<p>CONDUIT RACEWAY & WIRING LEGEND</p> <p>SYMBOL: DESCRIPTION:</p> <p> RACEWAY CONDUIT CONCEALED ABOVE CEILING OR WITHIN WALL UNLESS OTHERWISE NOTED. EACH CIRCUIT SHALL CONSIST OF PHASE, NEUTRAL AND GROUND CONDUCTORS. EVERY CIRCUIT SHALL HAVE ITS OWN INDIVIDUAL NEUTRAL. FOR LIGHTING CIRCUITS PROVIDE REQUIRED SWITCH LEGS TO ACHIEVE SWITCHING INDICATED ON PLANS.</p> <p> HOME RUN TO PANEL ALL HOMERUNS SHALL BE #10 AWG, 3/4" C., MINIMUM. WIRING HOME RUN: LETTER INDICATES PANEL; NUMBER IS BRANCH CIRCUIT(S)</p> <p> GROUNDING CONDUCTOR.</p> <p> CONDUIT IN/UNDER SLAB OR UNDERGROUND.</p> <p> CONDUIT CAP.</p> <p> CONDUIT FOR POWER.</p> <p> CONDUIT STUB-DOWN.</p> <p> CONDUIT STUB-UP.</p>
		<p>CODE DISCLAIMERS</p> <p>ELECTRICAL DESIGN IN ACCORDANCE WITH 2014 NATIONAL ELECTRIC CODE (NFPA-70), AS INCORPORATED BY THE 2017 FLORIDA BUILDING CODE SIXTH EDITION, AND 2017 FLORIDA FIRE PREVENTION CODE SIXTH EDITION.</p> <p>ALL MAIN FEEDERS HAVE BEEN SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP AND ALL BRANCH CIRCUIT FEEDERS HAVE BEEN SIZED FOR A MAXIMUM OF 3% VOLTAGE DROP PER FBC-6TH EDITION.</p>	
		<p>SUBMITTAL/ SHOP DRAWING DATA</p> <p>PROVIDE 6-SETS (EACH) OF MANUFACTURER'S DATA, O&M MANUALS, ELECTRICAL DATA, DIMENSIONAL DATA AND CLEARANCES, CONNECTION DATA, COLOR SAMPLES (IF REQUIRED), AND TEST DATA FOR THE FOLLOWING:</p> <p>LIGHTING FIXTURES, PANELS, SWITCHBOARDS, TRANSFORMERS, GENERATORS, UPS,</p> <p>SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED PRIOR TO ORDERING OF EQUIPMENT. ENGINEER WILL REQUIRE 7 WORKING DAYS TO REVIEW DRAWINGS. ANY ITEM FURNISHED AND/OR INSTALLED WITHOUT THE BENEFIT OF REVIEW AND ACCEPTANCE FOUND TO BE DEFICIENT SHALL BE SUBJECT TO REPLACEMENT AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S SOLE EXPENSE. ENGINEER WILL REQUIRE DETAILED, COMPLETED SUBMITTALS. IF ENGINEER IS REQUIRED TO REVIEW SUBMITTAL DATA MORE THAN TWICE, THAN THE CONTRACTOR WILL BE CHARGED \$125 PER HOUR FOR ADDITIONAL ENGINEERING TIME TO RELEASE SUBMITTALS.</p>	
		<p>NOT ALL SYMBOLS ARE USED IN EVERY DESIGN</p>	

ELECTRICAL SHEET INDEX		
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E002	ELECTRICAL SPECIFICATIONS	x
E100	ELECTRICAL SITE PLAN	x
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E102	ELECTRICAL NEW POWER AND LIGHTING PLAN	x
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E201	ELECTRICAL DETAILS	x

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architecture, interior design
Lic.#AA26001536-1B26000997
www.omnpd.com
5323 Millenia Lakes Boulevard
Suite 300
Orlando, FL 32839
tel - 407.696.1901

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rtm
engineering consultants
900 S. Semoran Blvd Suite 100 | Winter Park, FL 32789
T: 407.678.2055 | www.rtmconsultants.com

SEAL
TIMOTHY HEDRICK
LICENSED PROFESSIONAL ENGINEER
No. 80037
STATE OF FLORIDA
04/13/2018
Timothy Hedrick, PE 80037 (FL)

A PROPOSED DARK SHELL FOR:
BONNEVILLE DR PROP OFFICE BLDG.
1716, 1718, AND 1720 BONNEVILLE DR
ORLANDO, FLORIDA

DATE:	01/24/2018
PROJECT:	160202
DRAWN BY:	PK,MA
CHECKED BY:	MS
SHEET	1 OF 7

E001



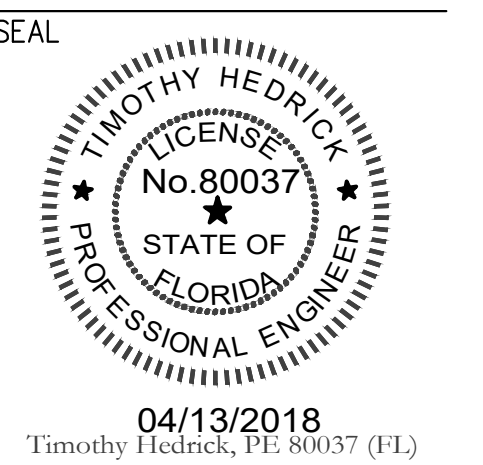
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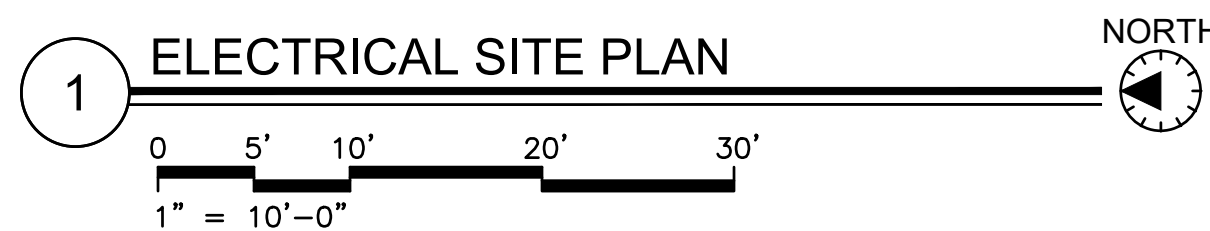
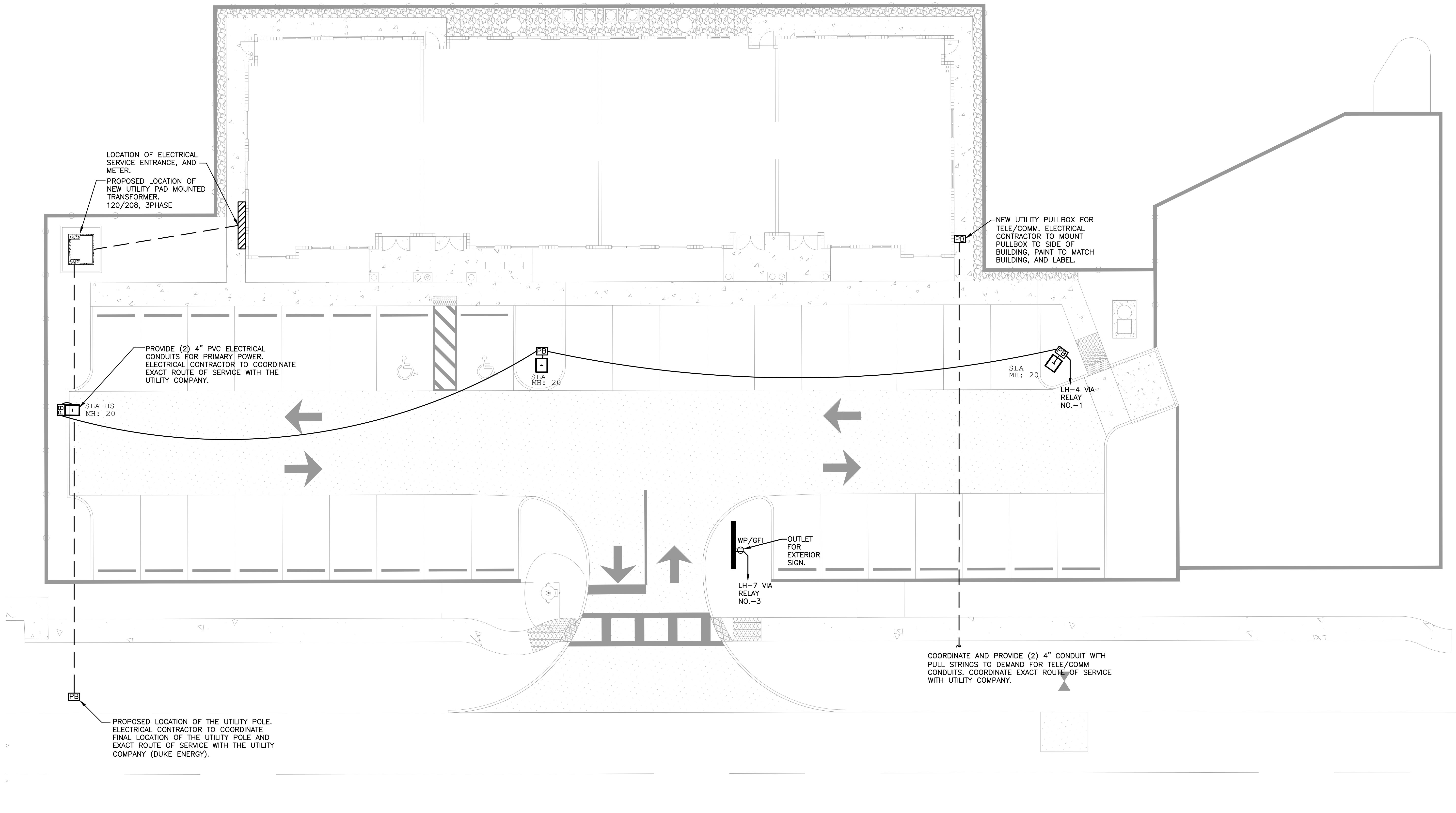
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 SHEET 3 OF 7

E100



SITE LIGHTING FIXTURE SCHEDULE				
TYPE	MANUFACTURER & PART NUMBER	DESCRIPTION	WATTAGE	VOLTAGE
SLA	LITHONIA DSXO LED 20C 700 40K T4M MVOLT	LED POLE MOUNTED FIXTURE. POLE MOUNTED @ 20'	45W	MVOLT
SLA-HS	LITHONIA DSXO LED 20C 700 40K T4M MVOLT HS	LED POLE MOUNTED FIXTURE. POLE MOUNTED @ 20'	45W	MVOLT

- CONTRACTOR SHALL PROVIDE SUBMITTAL OF ALL FIXTURES TO OWNER AND ARCHITECT. SUBMITTAL SHALL BE APPROVED BY OWNER, ARCHITECT AND ENGINEER PRIOR TO ORDERING ANY FIXTURES. IT IS THE RESPONSIBILITY OF THE LIGHTING VENDOR TO ENSURE OWNER & ARCHITECT HAVE SIGNED OFF ON SUBMITTALS. RTM ENGINEERING WILL NOT BE RESPONSIBLE FOR DESIGN INTENT OF FIXTURES NOT MEETING OWNER'S OR ARCHITECT'S EXPECTATIONS.
- ANY SUBSTITUTION OF FIXTURES WILL REQUIRE A FULL PHOTOMETRIC ANALYSIS TO BE PROVIDED FOR ALL SUBSTITUTED AREAS. LIGHTING VENDOR/DISTRIBUTOR WILL BE RESPONSIBLE FOR GATHERING AND EVALUATING DATA TO MATCH INTENDED FIXTURE PHOTOMETRIC RESULTS. SUBSTITUTED FIXTURES WILL NOT BE APPROVED WITHOUT PHOTOMETRIC PROVIDED WITH SUBMITTAL.
- SUBSTITUTION OF LIGHT FIXTURES SHALL BE PRESENTED FIFTEEN DAYS PRIOR TO BID. ANY ADDITIONAL ENGINEERING COST FOR RE-WORK OR EXTRA SUBMITTAL EVALUATION FOR SUBSTITUTIONS SHALL BE PAID FOR BY GENERAL CONTRACTOR.



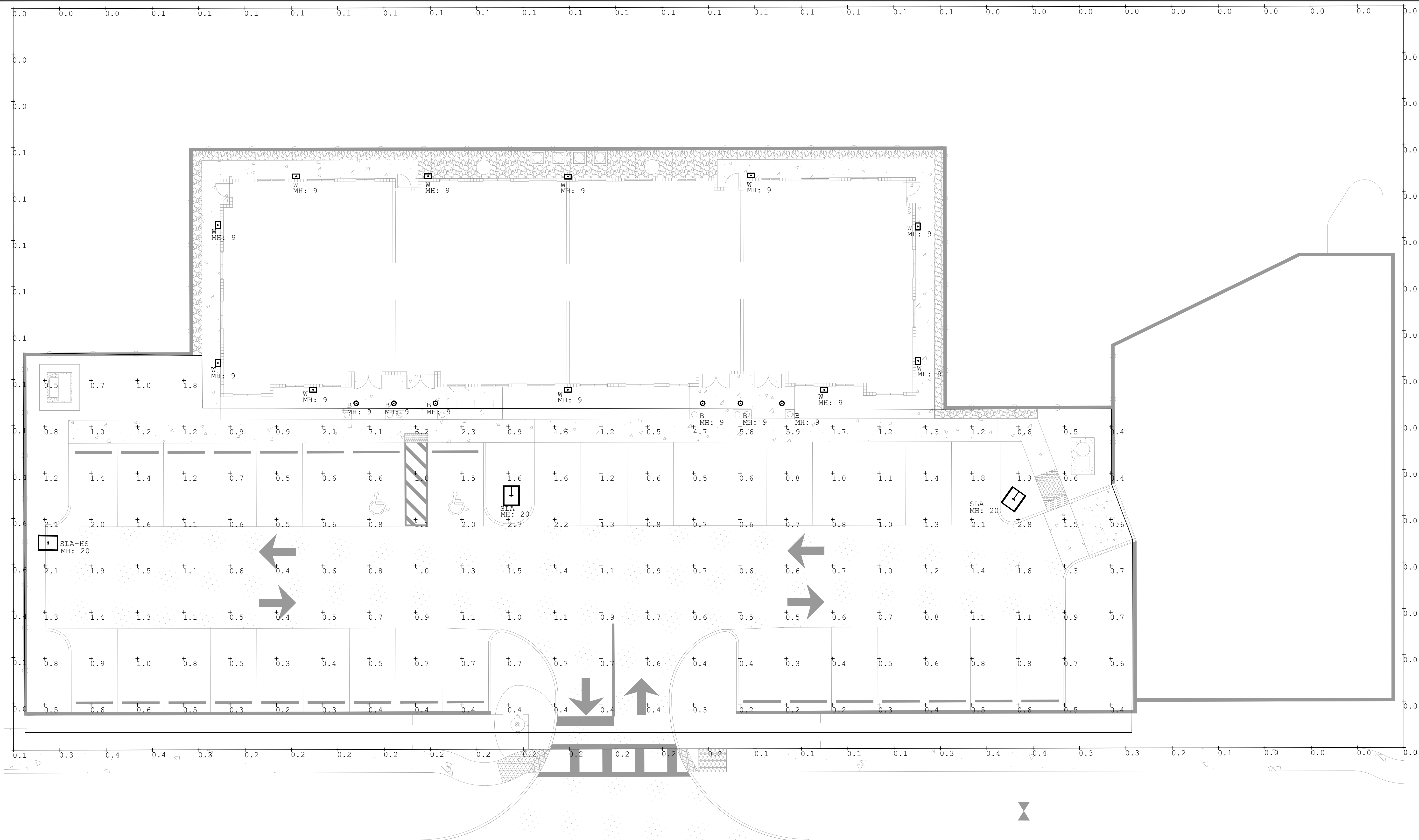
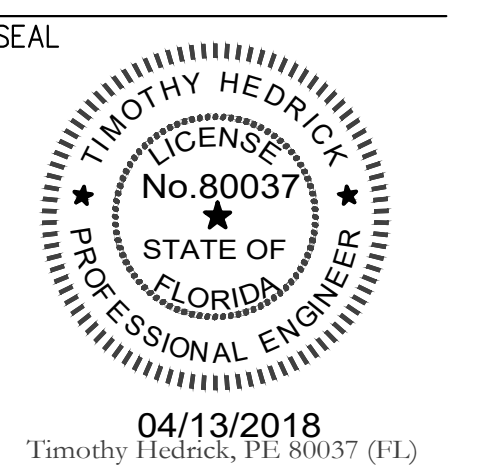
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1 ELECTRICAL PARKING LOT PHOTOMETRIC

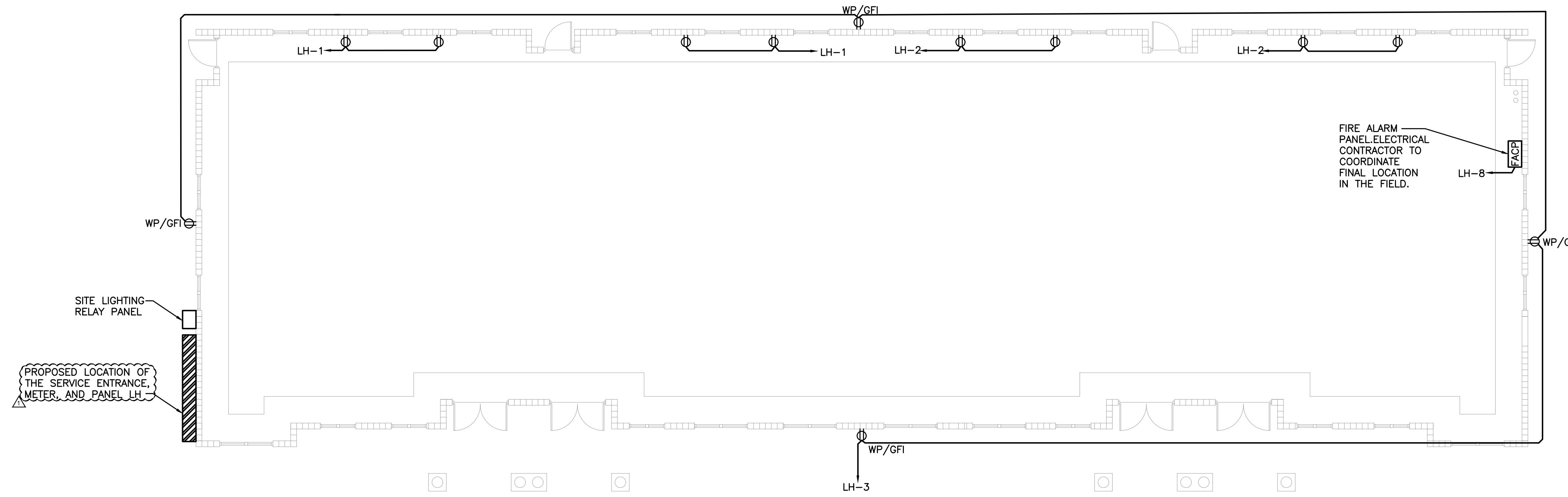
0 5' 10' 20' 30'
 1" = 10'-0"

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Tag
	2	DSX0 LED 20C 700 40K T4M MVOL	SINGLE	N.A.	1.000	DSX0 LED 20C 700 40K T4M MVOLT	SLA
	1	DSX0 LED 20C 700 40K T4M MVOL	SINGLE	N.A.	1.000	DSX0 LED 20C 700 40K T4M MVOLT HS	SLA-HS
	6	LDN6 30 15 LW6AR LS	SINGLE	N.A.	1.000	LDN6 30 15 LW6AR LS	B
	11	OWP3 42F 120 P LP	SINGLE	3200	1.000	OWP3 42F 120 P LP	W
Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT	ILLUMINANCE	Fc	1.06	7.1	0.2	5.30	35.50
PROPERTY LINE	ILLUMINANCE	Fc	0.12	0.6	0.0	N.A.	N.A.

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 SHEET 4 OF 7

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E101

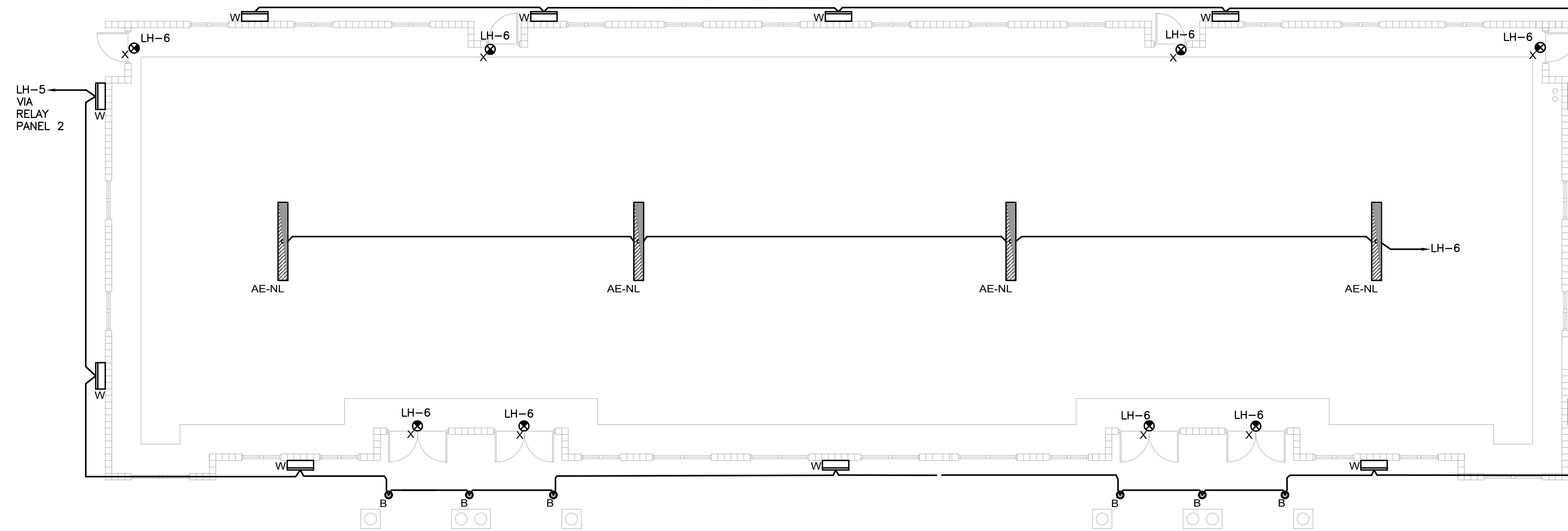


1 ELECTRICAL NEW POWER PLAN

0 4' 8' 16' 24'

1/8" = 1'-0"

NORTH



2 ELECTRICAL NEW LIGHTING PLAN

0 4' 8' 16' 24'

1/8" = 1'-0"

NORTH



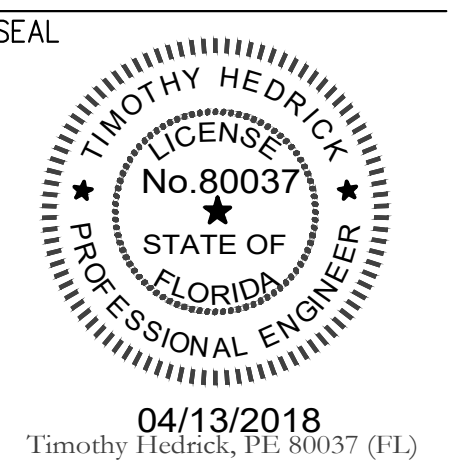
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SHEET	5 OF 7

E102



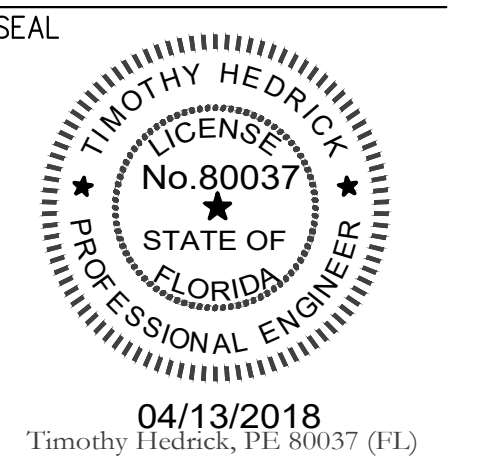
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ORLANDO, FLORIDA

DATE: 01/24/2018
PROJECT: 160202
DRAWN BY: PK,MA
CHECKED BY: MS
SHEET 6 OF 7

E200

UPDATED: 1/24/2018 11:25 am
ISSUED FOR: APPROVAL

PANEL LH

LOCATION: ELEC RM
VOLTAGE: 120V/208V
TRIM: SURFACE

MAIN: 60A MCB
SYSTEM: 3P-4W
BUS RATING: 60A

CONN. LOAD: 4.6 KVA
FEED: TOP
GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	OUTLET-INTERIOR	3/4"	#10	#10	#10	20/1	R	800				R	20/1	3/4"	#10	#10	OUTLET-INTERIOR	2
3	OUTLET-EXTERIOR	3/4"	#10	#10	#10	20/1	R	800				L	20/1	3/4"	#12	#12	SITE LIGHTING	4
5	LIGHTING - EXTERIOR	3/4"	#10	#10	#10	20/1	L	800	150			L	20/1	3/4"	#10	#10	LIGHTING - INTERIOR	6
7	LIGHTING - SIGN	3/4"	#10	#10	#12	20/1	L	1200	100			C	20/1	3/4"	#10	#10	FIRE ALARM CONTROL PANEL	8
9	SPARE	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	SPARE	10
11	SPARE	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	SPARE	12
13	SPARE	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	SPARE	14
15	SPARE	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	SPARE	16
17	SPARE	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	SPARE	18
19	SPARE	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	SPARE	20
21	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	22
23	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	24
25	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	26
27	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	28
29	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	30
31	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	32
33	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	34
35	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	36
37	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	38
39	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	40
41	"	-	-	-	-	20/1	-	-	-	-	-	-	20/1	-	-	-	"	42

2900 950 756 FROM: 60AMP DISCONNECT

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	REMAINING NON-CONTINUOUS LOADS	DEMAND LOADS	TOTAL CONNECTED LOAD	MIN. FEEDER/PANEL CAP.	OVERALL DEMAND FACTOR
LIGHTING	2106	1.25	2633	NON-SEASONAL MOTORS	0	1.0	0	100	1.25	125	4.6 KVA	12.8 AMPS	
RECEPTS TO 10 KVA	2400	1.0	2400	LARGEST MOTOR	0	0.25	0	0	1.0	0	5.2 KVA	14.3 AMPS	
RECEPTS REMAINING	0	0.5	0	WATER HEATING	0	1.0	0	0	1.0	0			
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	0	1.0	0	0	1.0	0			
AIR CONDITIONING	0	1.0	0										1.12

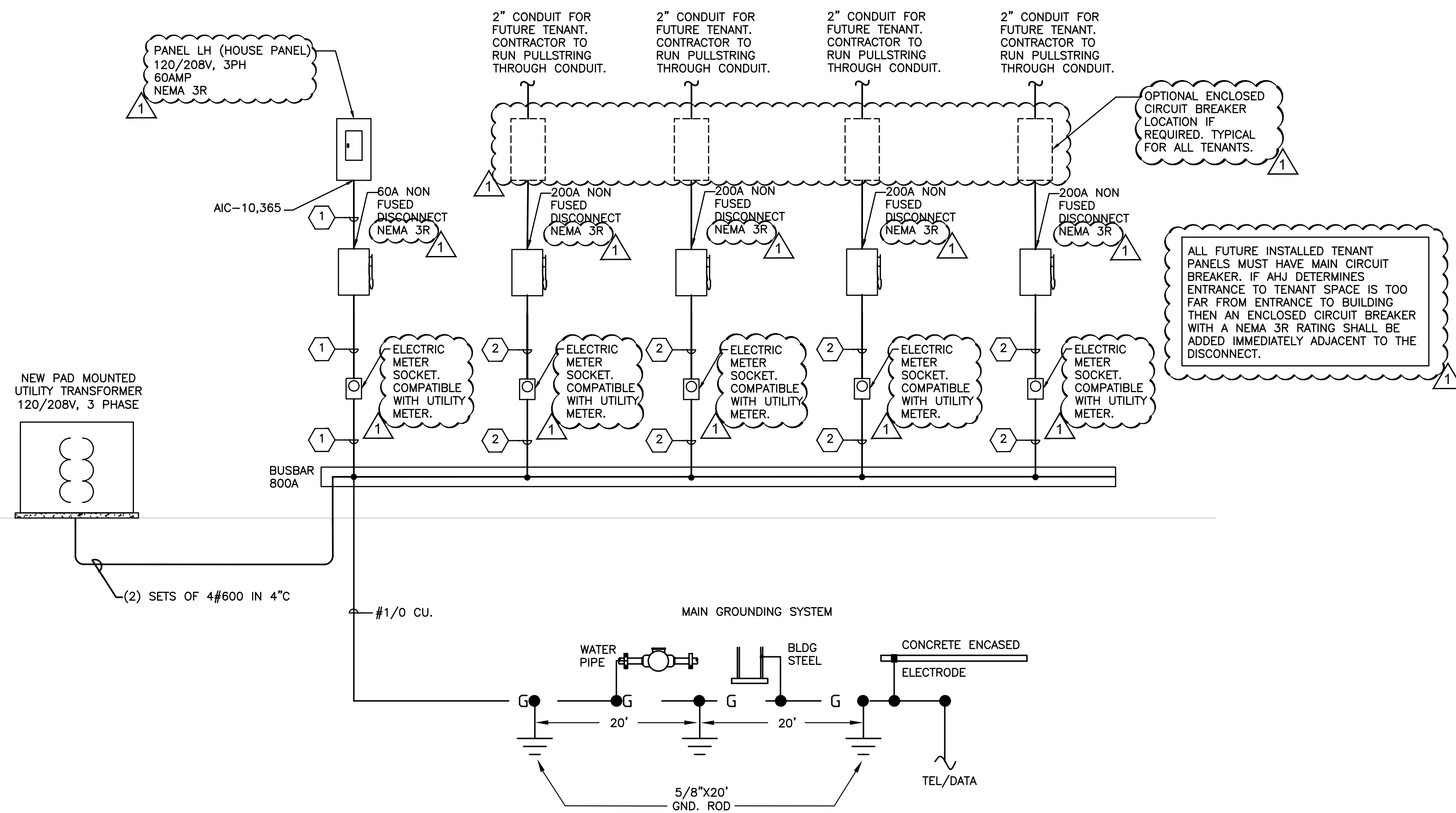
RELAY PANEL SCHEDULE

RELAY NO	LOCATION	CIRCUIT NO
1	SITE PARKING LOT LIGHTING	LH-4
2	EXTERIOR LIGHTING	LH-5
3	SIGN LIGHTING	LH-7
4	SPARE	

ELECTRICAL FEEDER SCHEDULE

TAG	FROM EQUIPMENT	TO EQUIPMENT	VOLTAGE	PHASE	TOTAL AMPS (DESIGN LOAD)	No. OF SETS	CONDUCTOR SIZE (THWN COPPER 75 DEG CELCIUS)			CONDUIT SIZES (EACH SET)	RUN DISTANCE (FT)	VOLTAGE DROP %
							FEEDER CONDUCTOR (KCML OR AWG) PER PHASE	NEUTRAL CONDUCTOR (KCML OR AWG)	GROUND (See note 1) (KCML OR AWG)			
	UTILITY TRANSFORMER	800A BUSBAR	208	3	800A	2	#350	#350	#4	3	100	2.07%
1	800A BUSBAR	PANEL LH	208	3	60	1	#6	#6	#10	1	5	0.15%
2	800A BUSBAR	FUTURE TENANT PANEL	208	3	100	1	#3/0	#3/0	#6	1	5	0.13%

1. ALL FEEDERS HAVE BEEN SIZED FOR 2% VOLTAGE DROP. ALL BRANCH CIRCUITS HAVE BEEN SIZED FOR 3% VOLTAGE DROP PER IBC

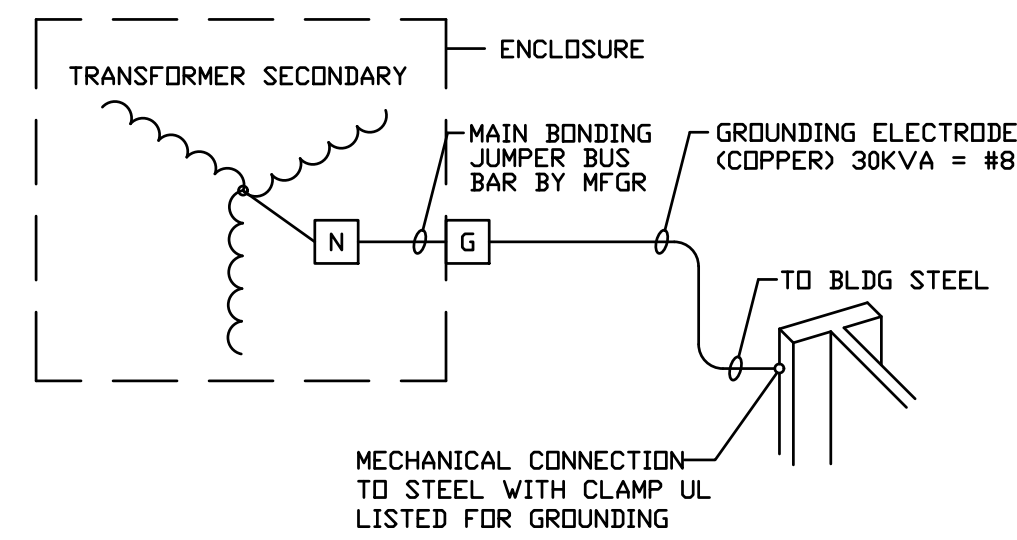


1 ELECTRICAL RISER DIAGRAM

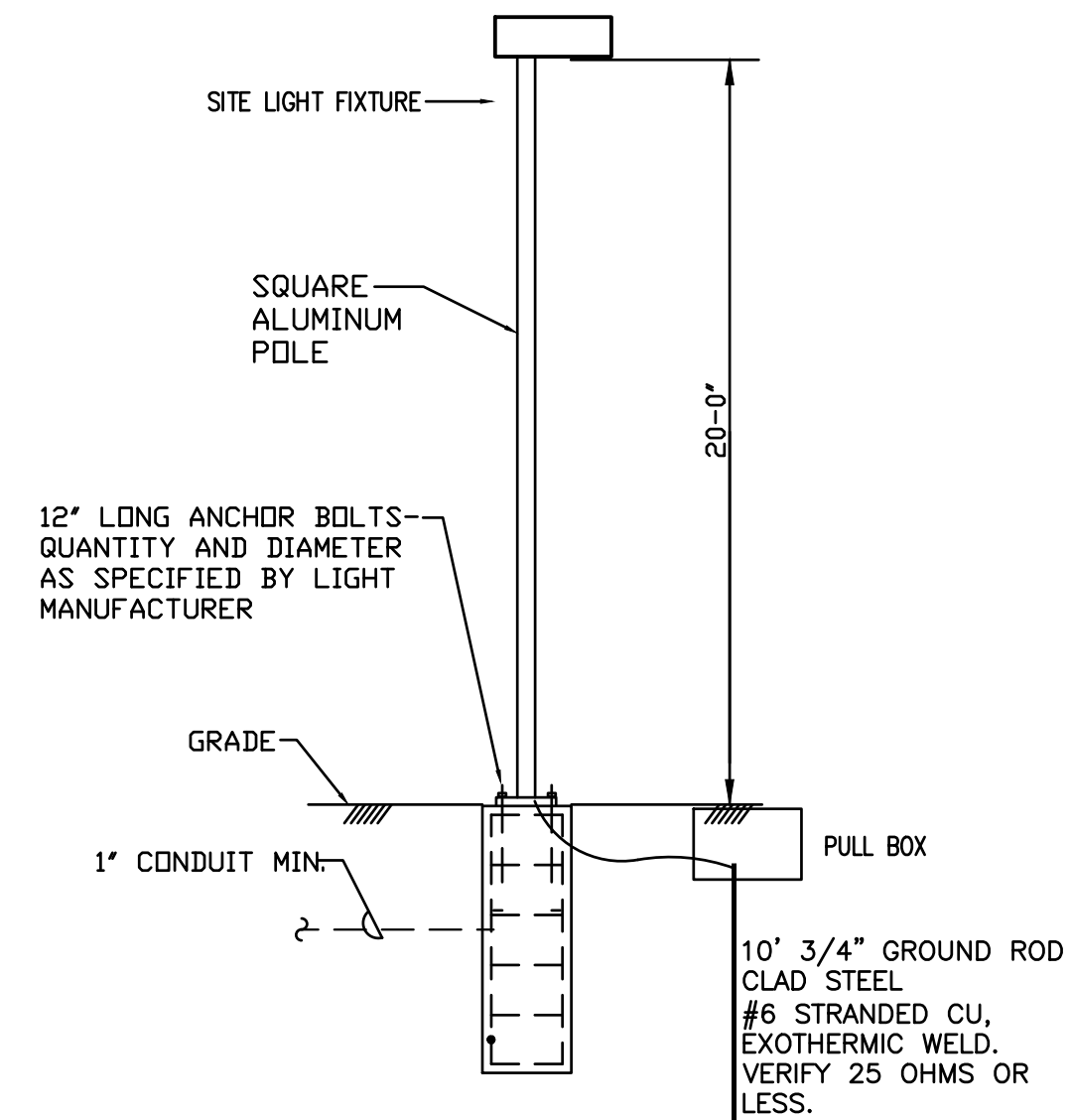
LIGHTING FIXTURE SCHEDULE (OR SIMILAR)

TYPE	MANUFACTURER & PART NUMBER	DESCRIPTION	WATTAGE	VOLTAGE
AE	LITHONIA CLX L96 6000LM SEF L/LENS GZ10 80CRI PS1050 MVOLT	1'84' CLX LED LINEAR STRIPLIGHT WITH EMERGENCY BATTERY BACKUP	38.15W	MVOLT
B	LITHONIA LDN6 3000K 15 AR LSS WL MVOLT	6" OPEN LED WET LOCATION DOWNLIGHTS	20.5W	MVOLT
W	LITHONIA KAXW LED 30K MVOLT	LED LUMINAIRE	25W	MVOLT
X	LITHONIA EXR LED EL M6	EXIT LIGHTING WITH EMERGENCY BATTERY BACKUP	.8W	MVOLT

- CONTRACTOR SHALL PROVIDE SUBMITTAL OF ALL FIXTURES TO OWNER AND ARCHITECT. SUBMITTAL SHALL BE APPROVED BY OWNER, ARCHITECT AND ENGINEER PRIOR TO ORDERING ANY FIXTURES. IT IS THE RESPONSIBILITY OF THE LIGHTING VENDOR TO ENSURE OWNER & ARCHITECT HAVE SIGNED OFF ON SUBMITTALS. RTM ENGINEERING WILL NOT BE RESPONSIBLE FOR DESIGN INTENT OF FIXTURES NOT MEETING OWNER'S OR ARCHITECT'S EXPECTATIONS.
- ANY SUBSTITUTION OF FIXTURES WILL REQUIRE A FULL PHOTOMETRIC ANALYSIS TO BE PROVIDED FOR ALL SUBSTITUTED AREAS. LIGHTING VENDOR/DISTRIBUTOR WILL BE RESPONSIBLE FOR GATHERING AND EVALUATING DATA TO MATCH INTENDED FIXTURE PHOTOMETRIC RESULTS. SUBSTITUTED FIXTURES WILL NOT BE APPROVED WITHOUT PHOTOMETRIC PROVIDED WITH SUBMITTAL.
- SUBSTITUTION OF LIGHT FIXTURES SHALL BE PRESENTED FIFTEEN DAYS PRIOR TO BID. ANY ADDITIONAL ENGINEERING COST FOR RE-WORK OR EXTRA SUBMITTAL EVALUATION FOR SUBSTITUTIONS SHALL BE PAID FOR BY GENERAL CONTRACTOR.



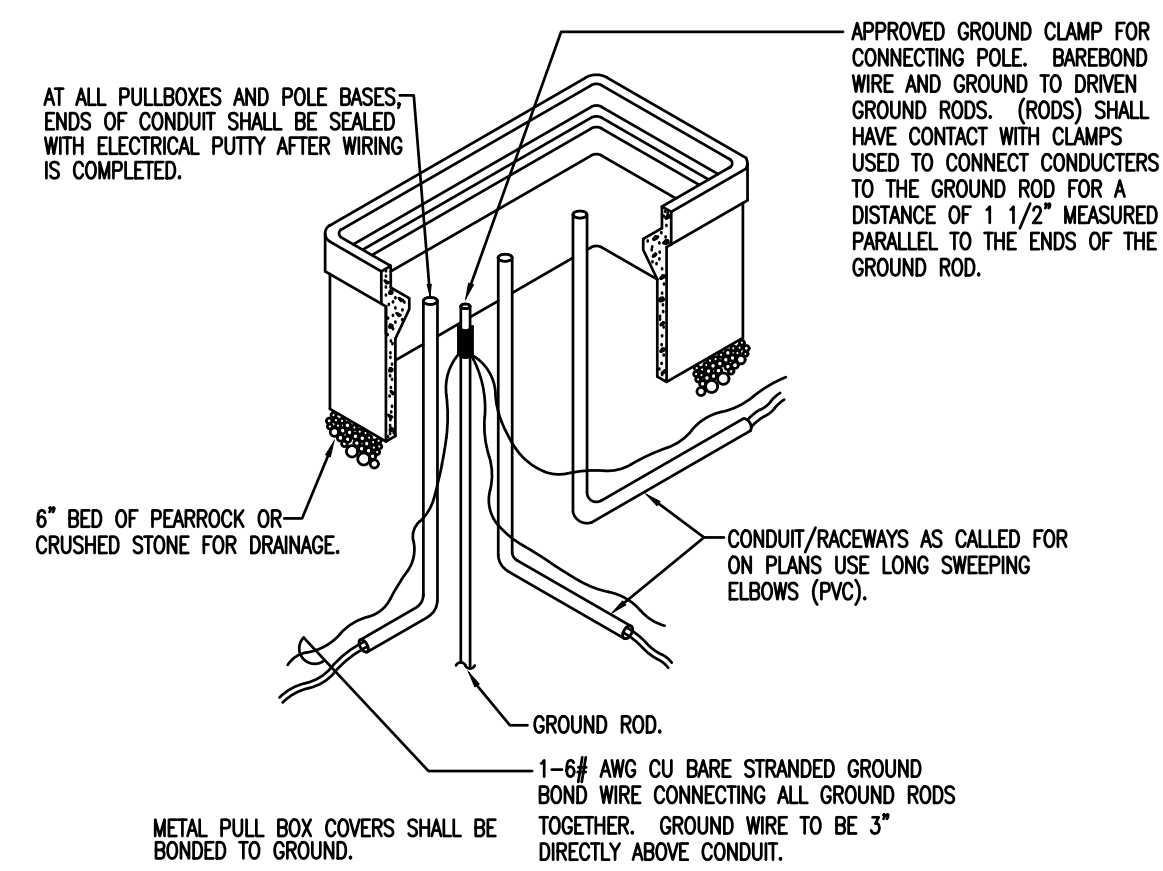
TRANSFORMER GROUNDING DETAIL
NOT TO SCALE



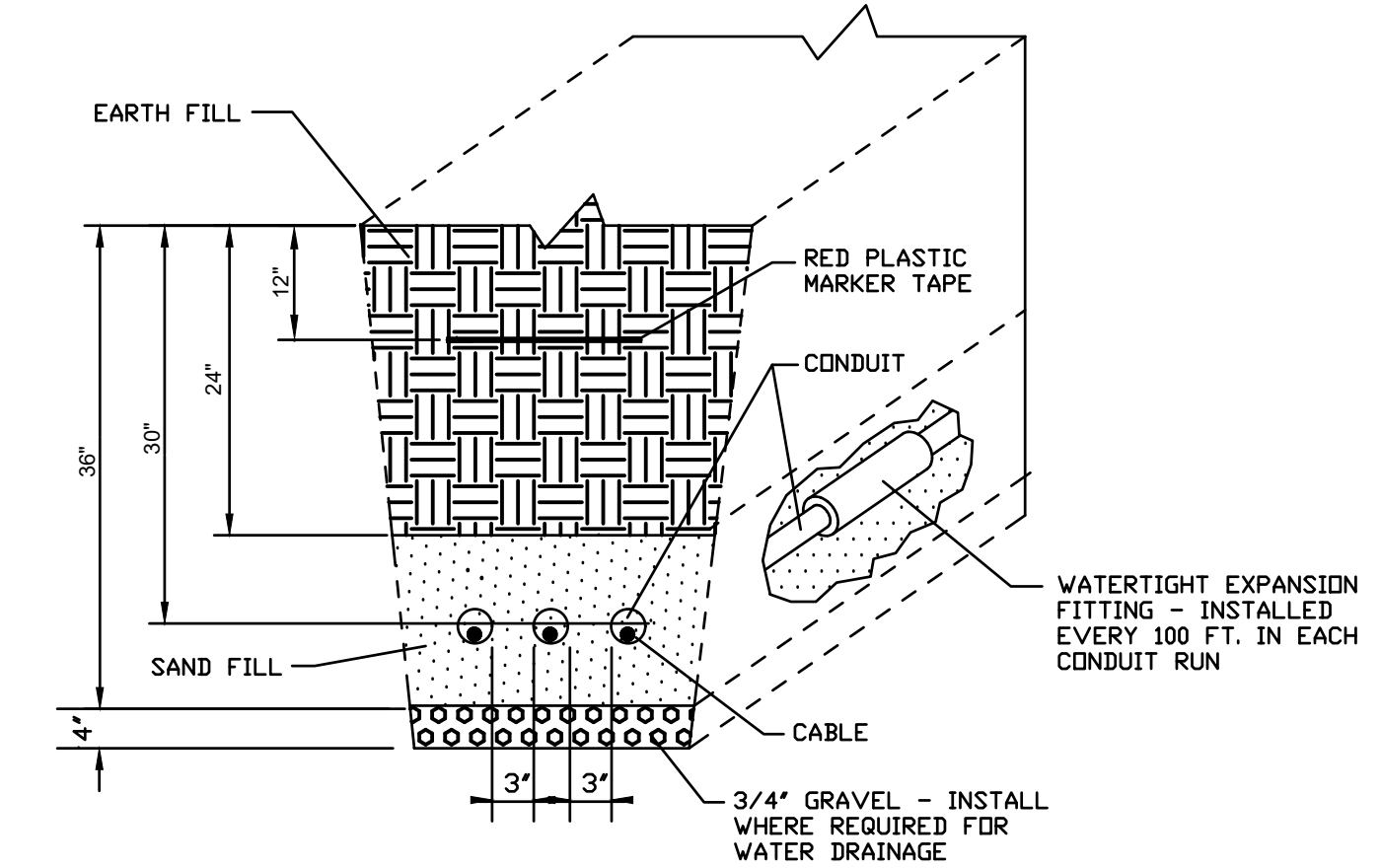
SITE LIGHT POLE INSTALLATION DETAIL
NOT TO SCALE

NOTE: REFER TO STRUCTURAL DRAWINGS/SKETCH FOR FOUNDATION SYSTEM DESIGN. LIGHT & POLE MANUFACTURER SHALL PROVIDE A FINAL FOUNDATION DESIGN BY A FLORIDA REGISTERED STRUCTURAL ENGINEER TO MEET WIND LOAD REQUIREMENTS PER FLORIDA BUILDING CODE.

- NOTES:**
- 1) CONDUITS NOT TERMINATING IN OR AT PULLBOXES NEED NOT RUN THROUGH PULLBOXES UNLESS REQUIRED FOR PULLING NEC.
 - 2) INSIDE DIMENSIONS TO BE:
10 1/2" x 17 1/4"
13" x 24"
17" x 28"
 - 3) COVER TO BE PROVIDED:
CAST IRON TRAFFIC COVER
CONCRETE PEDESTRIAN COVER
 - 4) PROVIDE EXTENSIONS AS REQUIRED.
 - 5) PULLBOX TO BE PRECAST, BROOKS, A.C. MILLER, OR HUGHES SUPPLY



LIGHT POLE PULLBOX DETAIL
NOT TO SCALE



INSTALLATION OF UNDERGROUND CONDUITS
NOT TO SCALE



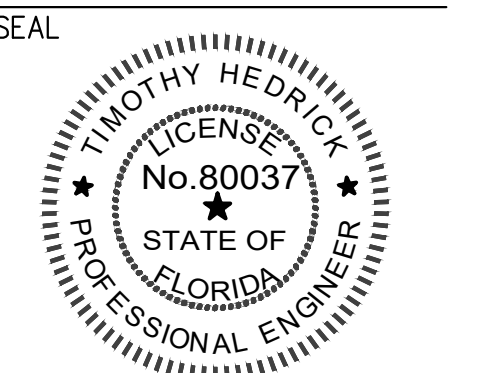
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www.omnpd.com
5323 Millenia Lakes Boulevard
Suite 300
Orlando, FL 32839
tel - 407.696.1901

REVISIONS:

▲	4/13/2018
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920 S. Semoran Blvd Suite 100 | Winter Park, FL 32789
T: 407.678.2055 | www.rtmconsultants.com



04/13/2018
Timothy Hedrick, P.E. 80037 (FL)

A PROPOSED DARK SHELL FOR:
BONNEVILLE DR PROP OFFICE BLDG.
1716, 1718, AND 1720 BONNEVILLE DR
ORLANDO, FLORIDA

DATE: 01/24/2018
PROJECT: 160202
DRAWN BY: PK,MA
CHECKED BY: MS
SHEET 6 OF 7

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