ELECTRICAL TELEPHONE / DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED. TELEPHONE/DATA OUTLET, RECESSED FLOOR MOUNTED, WITH 3/4" CONDUIT RUN TO THE NEAREST STUD WALL AND STUBBED OUT FROM WALL 6" ABOVE CEILING. PROVIDE BRASS COVER PLATE AND CARPET FLANGE. TELEVISION OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. -177-MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED. DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE. QUADRUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE. ∭GFI DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) WITH GROUND FAULT CIRCUIT INTERRUPTER, MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET. UNLESS NOTED OTHERWISE. DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING) MOUNTED ABOVE COUNTER SEE ARCHITECTUAL DRAWINGS FOR SPECIFIC REQUIREMENTS. DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING), RECESSED Θ FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE. DUPLEX RECEPTACLE (AMPERAGE RATING TO MATCH BRANCH CIRCUIT RATING), CEILING MOUNTED SPECIAL-PURPOSE RECEPTACLE (J) JUNCTION BOX EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS. SINGLE POLE, 20 AMP, SWITCH. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED. \$3 3-WAY, 20 AMP, SWITCH. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED. SINGLE POLE, 20 AMP, SWITCH WITH DIMMER. MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH \$D UNLESS OTHERWISE NOTED. MOTOR RATED SWITCH Sм DUAL TECHNOLOGY WALL SWITCH/OCCUPANCY SENSOR, WATT STOPPER DW-100 SERIES. Ъos MOUNT 42" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED. SEE DETAIL ON SHEET EO.1 30 MINUTE MAXIMUM TIME DELAY. 24VDC/VAC DUAL TECHNOLOGY OCCUPANCY SENSOR, WATT STOPPER DT-300 SERIES. (0S)MOUNT IN CEILING. PROVIDE WITH POWER PACK BZ-150 SET FOR MANUAL ON. 30 MINUTE MAXIMUM TIME DELAY. UNIVERSAL DECORATOR STYLE DIMMABLE WALL SWITCH, WATT STOPPER WD-280 SERIES. Sosd MOUNT 48" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED. SEE SHEET E7.1. DECORATOR LOW VOLTAGE MOMENTARY OVERRIDE SWITCH. WATTSTOPPER #DCC2, UNLESS Ъov OTHERWISE NOTED. FOUR HOUR MAXIMUM TIME DELAY. FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING ₩⊐ ₽A GROUNDING ELECTRODE & CONDUCTOR SYSTEM TRANSFORMER ELECTRICAL PANELBOARD TELEPHONE WOOD BACKBOARD WP WEATHERPROOF т/с TIME CLOCK RELOCATED RE EXISTING TO REMAIN ABOVE FINISH FLOOR A.F.F. 0.C. OVER COUNTER REC. RECEPTACLES LTG. LIGHTING

SY	MBOLS

- ELECTRICAL SHEET INDEX SHEET# DESCRIPTION E0.1 ELECTRICAL NOTES, LEGEND & INDEX E2.1 ELECTRICAL LIGHTING PLAN E3.1 ELECTRICAL POWER PLAN E3.2 ELECTRICAL ROOF PLAN E5.1 ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULES ELECTRICAL SPECIFICATIONS PART 1 - GENERAL PART 3 - EXECUTION A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. 1. 208/120 VOLTS, 3 PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK, 1 RED AND 1 IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY BLUE. GROUNDED (NEUTRAL) CONDUCTOR; WHITE. GROUNDING CONDUCTORS SHALL BE GREEN. THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND 2. BRANCH CIRCUIT WIRING (#6 AND SMALLER) SHALL BE COLOR CODED BY CONTINUOUS INSULATION SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL ARCHITECT/ENGINEER HAS DIRECTED COLOR AND FEEDERS AND SERVICES (#4 AND LARGER) SHALL BE CODED AT ALL JUNCTION OR CORRECTIVE ACTION TO BE TAKEN. PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLOR MARKERS OR PLASTIC TAPE MANUFACTURED THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL FOR THE PURPOSE. CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO B. WIRING METHODS THE COST THEREOF. 1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC OTHERWISE NOTED, SPECIFIED OR AS SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE. UTILIZED IN THIS PROJECT. 2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL NATIONAL ELECTRICAL CODE (NFPA-70, 2011 EDITION) BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE. . CODE FOR SAFETY TO LIFE (NFPA-101, 2012 EDITION) 3. TYPE MC CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED SYSTEMS (NFPA-72, 2010 EDITION) IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING 4. UNDERWRITERS' LABORATORIES (UL) JURISDICTION. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) EDITION OF THE N.E.C. AND LOCAL CODES. FEDERAL SPECIFICATION (FED. SPEC.) D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS 8. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA) WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. . FLORIDA BUILDING CODE. 2014 EDITION (AS AMENDED) E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS 10. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) OF CONSTRUCTION. F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE
 - 11. CITY OF MARGATE BUILDING CODE. (AMENDMENTS TO FLORIDA BUILDING CODE 2014) 12. ADDITIONALLY, DESIGNS, WORK PRACTICES AND CONDITIONS MUST CONFORM WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA)
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THERE BY. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND
- PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL MEAN THAT THE CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT COMPLETE.
- PART 2 PRODUCTS
- A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. (EXCEPT AS NOTED OTHERWISE FOR CONTROL WIRING). B. ALL CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER WITH "THHN-THWN" INSULATION UNLESS OTHERWISE NOTED.
- . ELECTRICAL METALLIC TUBING (EMT) SHALL BE OF BEST QUALITY STEEL, SMOOTH INSIDE AND OUT AND SHALL BE HOT-DIPPED GALVANIZED. RIGID NONMETALLIC CONDUIT SHALL BE SCHEDULE 40 PVC.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE. PANELBOARDS:
- 1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER. 2. ALL CIRCUIT BREAKERS SHALL BE BOLT ON. PLUG-IN BREAKERS ARE NOT ACCEPTABLE. 3. CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL
- BE LISTED AND MARKED "SWD" OR "HID" AS REQUIRED. 4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
- 5. A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
- 6. ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
- 7. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE-WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS. PROVIDE ELECTRICAL EQUIPMENT WITH FIELD MARKING TO WARN OF POTENTIAL ELECTRIC ARC FLASH HAZARDS AS REQUIRED BY THE NEC ARTICLE 110.16.
- DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK.
- ENCLOSURES SHALL BE NEMA-1 FOR INDOOR LOCATIONS, NEMA 3R FOR OUTDOOR LOCATIONS
- OR AS OTHERWISE NOTED. WIRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) SHALL BE WHITE COLOR UNLESS
- OTHERWISE NOTED. FACEPLATES SHALL BE SMOOTH, WHITE NYLON.

LIGHTING FIXTURE SCHEDULE

			LAMPS		BALLAST	INPUT	
SYMBOL	DESCRIPTION	NO.	TYPE	WATT	TYPE	WATTS	MOUNTIN
	2'x4' FLUORESCENT PARABOLIC TROFFER WITH 3" DEEP, 18 CELL LOUVER, LOW IRIDESCENT SILVER FINISH AND BLACK REVEAL. EXISTING.	3	Т8 3500 ° К	32	HIGH FREQ. ELECTRONIC	101	CEILING RECESS
\square	2'x2' FLUORESCENT PARABOLIC TROFFER WITH 3" DEEP, 9 CELL LOUVER, LOW IRIDESCENT SILVER FINISH AND BLACK REVEAL. MATCH EXISTING.	2	Т8 3500 ° К	32	HIGH FREQ. ELECTRONIC	67	CEILING RECESS
	PENDANT LUMINAIRE, SELECTED BY OWNER, PROVIDED BY CONTRACTOR.	-	-	1600 MAX		1600 MAX	CEILING SUSPENI
	DUAL FACE THERMOPLASTIC EXIT SIGN/LIGHT LITHONIA "LQMS" SERIES. PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACK UP.	_	LED	_	-	_	UNIVERS
\bigotimes	SINGLE FACE THERMOPLASTIC EXIT SIGN/LIGHT LITHONIA "LQMS" SERIES. PROVIDE FIXTURE WITH 90 MINUTE BATTERY BACK UP.	_	LED	_	-	_	UNIVERS
	THERMOPLASTIC EMERGENCY BATTERY PACK LITHONIA "ELM2" SERIES.	2	HALOGEN	12	-	25	_

NOTES: A. VERIFY CEILING TYPES PRIOR TO ORDERING FIXTURES.

B. PROVIDE ALL FLUORESCENT FIXTURES THAT UTILIZE DOUBLE-ENDED LAMPS AND CONTAIN BALLAST'S WITH A BUILT-IN MEANS TO DISCONNECT THE BALLAST FROM THE SOURCE OF SUPPLY. C. VERIFY FINISH WITH ARCHITECT PRIOR TO PURCHASING.

D. FIXTURE SHALL COMPLY WITH 2011 NEC-410.130(G) - DISCONNECTING MEANS FOR BALLAST.

- COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK. G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED. H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW
- AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IECE. CONTRACTOR SUBMITTALS:
- I. SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT. 2. AS-BUILT ELECTRICAL DRAWINGS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY FLORIDA BUILDING CODE, ARTICLE 505.7.4.1
- 3. OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY FLORIDA BUILDING CODE, ARTICLE 505.7.4.2. J. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
- K. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER. L. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL M. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL
- DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. N. VOLTAGE DROP 1. CONDUCTORS FOR ALL FEEDERS SHALL BE INCREASED FROM SIZES INDICATED ON DRAWINGS TO
 - PREVENT VOLTAGE DROP EXCEEDING 2%. 2. CONDUCTORS FOR ALL BRANCH CIRCUITS SHALL BE INCREASED FROM SIZES INDICATED ON DRAWINGS TO PREVENT VOLTAGE DROP EXCEEDING 3%. FROM THE FURTHEST DEVICE. 3. DETERMINING CONDUCTOR SIZES SHALL BE BASED ON 80% OF THE BREAKER RATING.
 - 4 FOR DETERMINATION OF WIRE SIZE FOR BID PURPOSES:
 - * INCREASE WIRE BY 1 WIRE SIZE FOR RUNS 60 FT. TO 100 FT. * INCREASE WIRE BY 2 WIRE SIZES FOR RUNS 100 FT. TO 150 FT.
 - * INCREASE WIRE BY 3 WIRE SIZES FOR RUNS FROM 150 FT. TO 230 FT.

O. PROVIDE CABLE LUGS SIZED FOR THE LINE AND/OR LOAD SIDE FEEDERS AS SCHEDULED FOR ALL SWITCHBOARDS, PANELBOARDS AND DISCONNECTS. WHERE CABLE LUGS ARE NOT AVAILABLE FOR THE SPECIFIC WIRE SIZE AND NUMBER OF SETS SCHEDULED, PROVIDE A TAP BOX ADJACENT TO THE EQUIPMENT WITH "POLARIS" TAPS TO TRANSITION TO CONDUCTORS TO MATCH THE CABLE LUGS AVAILABLE AND THE AMPERE RATING OF THE OVER-CURRENT DEVICE PROTECTING THE FEEDER.

P. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS. Q. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION. R. ANY CONFLICTS AND DESCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.

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ISSUED FOR PERMIT ISSUED FOR CONSTRUCTION

KAMM CONSULTING PROJECT #: 2016-050 PROJECT MANAGER: NICK RODRIGUEZ

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> > signed

08-04-2016

SIEVEN E. MYOT						
- INTERIOR RENOVATION -	PENN DUTCH PLAZA 3191 SR7 MARGATE, FLORIDA 33063					
ARCHITE SEA	MY O.T.T. A.P.C. H					
ALL DRAWINGS AND W APPEARING HEREIN CONS UNPUBLISHED WORK OF MAY NOT BE USED, DUPLI IN ANY FORM WITHOU WRITTEN CONSENT O	/RITTEN MATERIAL TITUTE ORIGINAL AND THE ARCHITECT AND CATED OR DISCLOSED T THE EXPRESSED F THE ARCHITECT					
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