SPECIFICATIONS

CONTRACTOR SHALL REFER TO ALL RELATED DOCUMENTS, ARCHITECTURAL, STRUCTURAL CIVIL AND MEP DRAWINGS, AND FULLY UNDERSTAND THE SCOPE OF WORK AND CONDITION OF CONSTRUCTION.

THE WORK UNDER THIS SPECIFICATIONS AND DRAWINGS SHALL INCLUDE ALL LABOR.

ALL INSTALLATION OF DEVICES AND CONNECTION OF CONDUCTORS SHALL BE PERFORMED BY LICENSED AND SKILLED ELECTRICIAN OR JOURNEYMAN.

ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER. IF ANY PORTION OF THE WORK IS FOUND UNSATISFACTORY BY THE OWNER, IT SHALL BE REMOVED AND REINSTALLED WITHOUT DELAY AT NO COST TO THE OWNER.

THE WORK INCLUDES, BUT NOT LIMITED TO:
THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM.
ROUGH-IN AND FINAL CONNECTIONS TO ALL DEVICES REQUIRING ELECTRICAL POWER,
INCLUDING OWNER PROVIDED EQUIPMENT.

IGHTING FIXTURES

EACH CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED BY THE REGULATORY AUTHORITIES. ALL FEES RELATED TO OBTAINING PERMITS AND INSPECTION SHALL BE PAID FOR BY EACH CONTRACTOR IN HIS TRADE.

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH LOCAL, COUNTY, STATE, AND NATIONAL ELECTRICAL CODE 2017, SPECIFICATIONS, UTILITY COMPANY REQUIREMENTS AND ALL INDUSTRY STANDARDS

ANY DIFFERENCES IN ABOVE MENTIONED REQUIREMENTS, THE MOST STERN SHALL

IN ADDITION TO ABOVE MENTIONED CODES AND SPECIFICATIONS, THE FOLLOWING INDUSTRY STANDARDS SHALL BE COMPLIED IF THEY ARE MORE STRINGENT. IEEE IES

ASHRAE 90.1 NFPA NEMA

THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY STORAGE, PROTECTION, INSTALLATION AND WIRING OF ALL EQUIPMENT AND MATERIAL

THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, THE DRAWINGS SHOW DIAGRAMMA TICALLY THE LOCATIONS OF THE VARIOUS LINES, CONDUITS, TRITITIES, AND EQUIPMENT AND THE METHOD OF CONNECTIONS AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM. THE SYSTEMS SHALL INCLUDE BUT ARE NOT LIMITED TO THE ITEMS SHOWN ON THE DRAWINGS. EXACT LOCATIONS OF THESE ITEMS SHALL BE DETERMINED BY REFERENCE TO THE GENERAL PLANS AND MEASUREMENTS AT THE BUILDING AND ICOOPERATION WITH THE OTHER SUBCONTRACTORS, AND IN ALL CASES, SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE OWNER RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGE IN THE LOCATION OF ANY PART OF THIS WORK WITHOUT ADDITIONAL COST TO THE OWNER

CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FOR ANY CHANGES TO THE SPECIFICATIONS OR CONTRACT DOCUMENTS.

ANY EXCEPTIONS, INCONSISTENCIES AND CONFLICTS IN CONTRACT DOCUMENTS, SPECIFICATIONS AND CONTRACT DOCUMENTS BY OTHER TRADE SHALL BE BROUGHT TO ATTENTION TO THE OWNER PRIOR TO BID.

CONTRACTOR SHALL COORDINATE AND VERIFY THE WORK WITH EXISTING CONDITIONS AND THE WORK OF CITIER TRADE PRIOR TO ANY FABRICATIONS OR INSTALLATION. IF THE LAYOUT OF THE DEVICES ON DRAWINGS ARE IMPRACTICAL TO THE CONDITION IN FIELD. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY PRIOR TO ANY FABRICATION OR INSTALLATION.

ELECTRICAL DEVICES ARE INDICATED ON DRAWINGS AT APPROXIMATE LOCATIONS. THE OWNER RESERVE THE RIGHT TO MAKE REASONABLE CHANGES IN LOCATIONS WITHOUT ADDITIONAL COSTS.

THE LINES INDICATING BRANCH CIRCUITS DO NOT REPRESENT THE ROUTING OF ELECTRICAL CONDUITS. THEY INDICATE THE LAYOUT AND CONTROL OF CIRCUITS.

PRODUCTS AND WORK

MATERIALS FURNISHED SHALL BE NEW AND BY STANDARD MANUFACTURERS AND MUST CONFORM TO THE NATIONAL BOARD OF FIRE UNDERWRITER'S REQUIREMENTS AND BEAR THE UNDERWRITER'S LABORATORIES' SEAL OF APPROVAL.

LISTED MANUFACTURERS, MODELS, OR CATALOGUE NUMBERS IN PART OR ALL SHALL ENTAIL TO INCLUDE THE PUBLISHED MANUFACTURER'S DESCRIPTION AND SPECIFICATION.

CONTRACTOR SHALL NOT INTERPRET THAT THE LISTED MANUFACTURERS IN SPECIFICATIONS OR DRAWINGS TO EXCLUDE ALL OTHER MANUFACTURERS

CONTRACTOR SHALL MAKE CERTAIN THAT ALL EQUIPMENT FIT IN THE SPACE DESIGNATED AND DESIGNED FOR THE SURROUNDINGS IT OCCUPIES.

COMPLETE CATALOGUE ILLUSTRATION AND DESCRIPTIONS OF ALL EQUIPMENT SHALL BE SUBMITTED TO THE OWNER PRIOR TO ORDERING ANY EQUIPMENT.

ALL HORIZONTAL RUNS OF CONDUITS SHALL BE SUPPORTED BY MEANS OF APPROVED HANGER FROM THE STRUCTURAL CEILING.

COORDINATE THE WORK UNDER THIS SECTION WITH ALL OTHER TRADES.

CONDUITS AND RACEWAYS:

MANUFACTURERS: SQUARE D, B-LINE, ALLIED TUBE & CONDUIT, HOFFMAN, CARLON ELECTRICAL, WIREMOLD.

OUTDOORS EXPOSED. RIGID STEEL
OUTDOORS CONCEALED ABOVE GROUND: RIGID STEEL
OUTDOORS UNDERGROUND. TYPE EPC-40-PVC
OUTDOORS UNDERGROUND. TYPE EPC-40-PVC
OUTDOORS CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND
MOTOR DRIVEN EQUIPMENT). L'FINC
BOXES AND ENCLOSURES ABOVE GROUND. NEMA 3R UNLESS NOTED OTHERWISE IN
INDOORS EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE EMT
INDOORS EXPOSED NOT SUBJECT TO SEVERE PHYSICAL PARE SEED.
INDOORS EXPOSED SUBJECT TO SEVERE PHYSICAL DAMAGE THE TIELD ON THE SEED OF THE SECOND OF THE SEED OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND ON THE SECOND OF THE SECOND ON THE SECOND OF THE SECOND ON T

NDOORS CONNECTION TO VIBRATING EQUIPME WETLOCATIONS

NDOORS DAMP OR WET LOCATIONS: IMC.

INDOORS LOW-VOLTAGE CABLES: EMT

GROUNDING AND BONDING

ALL GROUNDING AND BONDING SHALL CONFORM TO NEC ARTICLE 25

COPPER WIRE OR CABLE INSULATED FOR 600V UNLESS REQUIRED BY APPLICABLE CODE OR

INSTALL SOLID CONDUCTOR FOR #8 AWG AND SMALLER AND STRANDED CONDUCTORS FOR #6 OR LARGER.

NSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS FOR ALL EQUIPMENT

SPECIFICATIONS

CONDUCTORS:

COPPER CONDUCTORS #10 AND SMALLER

LABELED PER UL 83, TYPE THHN/THWN, SOLID COPPER 600 VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA METAL CLAD (TYPE MC) CABLE WHERE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 330.

COPPER CONDUCTORS #8 OR LARGER:

LABELED PER UL 83, TYPE THHN/THWN, STRANDED COPPER, 600VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA.

ACCEPTABLE MANUFACTURERS OF CONDUCTORS:

PIRELLIE SOUTHWIRE AETNA REPUBLIC

ENCORE WIRE

CONTRACTOR MAY USE ALUMINUM CONDUCTORS FOR #4 AWG OR LARGER IN THE PLACE OF COPPER CONDUCTORS. CONTRACTOR SHALL REFER TO NEC TABLE 310-16 FOR EQUIVALENT MMPACITY AND SHALL COMPENSATE FOR VOLTAGE DROP.

INCLUDE SCHEDULE OF ALL FUSES, RATINGS, TIME COORDINATION DATA, MANUFACTURER'S STANDARD DATA AND TIME-CURRENT CURVES. ALL DATA SHALL BE BASED ON TEST OF STANDARD PRODUCTS.

APPROVED MANUFACTURERS: GENERAL ELECTRIC CUTLER HAMMER SQUARE D SIEMENS

THERMAL-MAGNETIC BOLT-IN TYPE CIRCUIT BREAKERS WITH QUICK-MAKE, QUICK-BREAK CONTACTS; TRIP-FREE OPERATION WITH OVER-THE-CENTER TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE.

TRIP RATINGS SHALL BE MOLDED ON THE HANDLE OR FACE OF BREAKER.

BREAKER TERMINALS SHALL BE RATED TO ACCOMMODATE A MINIMUM OF 75 DEGREE C.

SINGLE POLE BREAKERS RATED 15 AND 20 AMPERES SHALL BE UL LABELED AS "SWITCHING BREAKERS" AT THE APPLIED CIRCUIT VOLTAGE.

MULTI-POLE BREAKERS RATED 100 AMPERES AND LARGER SHALL BE MOLDED CASE THERMAL-MAGNETIC BOLT-IN TYPE BREAKER WITH ADJUSTABLE INSTANTANEOUS TRIF

LIGHTING FIXTURE

SUBMITTAL

SCHEDIJI E BY TYPE DESIGNATION ALL LIGHTING FIXTURES. FACH COMPLETE WITH DATA SHEET WITH COMPLETE PHYSICAL, ELECTRICAL AND LIGHTING CHARACTERISTICS, LAMP TYPE AND LAMP DATA.

REFER TO THE "LIGHTING FIXTURE SCHEDULE" IN THE DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS AND MANUFACTURER TYPES.

PROVIDE LAMPS FOR EACH FIXTURE OF QUANTITY, TYPE AND COLOR AS LISTED IN LIGHTING FIXTURE SCHEDULE. GE, SYLVANIA OR PHILIPS ARE ACCEPTABLE.

EACH LIGHTING FIXTURE SHALL BE UL LABELED FOR PROPER OPERATION IN THE TYPE OF CEILING CONSTRUCTION AND FOR THE MOUNTING ARRANGEMENT ON/IN WHICH IT IS INSTALLED.

FIELD VERIFY ACTUAL CEILING SLOPE FOR FIXTURES INSTALLED IN SAME AND AC DIMENSIONS AND ANGLES OF CONSTRUCTION FOR ANY INTURE CONFORMING T AND LENGTH OF SAME, FOR COORDINATION OF FIXTURE CONSTRUCTION.

PANELBOARD

SUBMITTAL:

INCLUDE SCHEDULE OF EACH PANELBOARD WITH ALL DEVICES AND AMPLETE V PHYSICAL AND ELECTRICAL DATA AND WITH RATINGS FOR EACH AMPLIENT INC BREAKER/FUSE OVERLAY CURVES.

ABELED PER UL #67 AND #50, CONFORM WITH NEMA # 84 AND 70-373.

ALL JUNCTION BOXES SHALL BE LABELED WITH PART

ROVIDE TYPED CIRCUIT DIE

VITCHES:

MABLE, WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL 917. 20-

FF SET POINTS ON A 24-HOUR SCHEDULE AND ANNUAL HOLIDAY SCHDULE THAT IDES THE WEEKLY OPERATION ON HOLIDAYS

LOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION - A PROGRAM

BATTERY BACKUP FOR NOT LESS THAN SEVEN DAYS RESERVE TO MAINTAIN SCHEDULES AND TIME CLOCK.

INDOOR OCCUPANCY SENSORS:

WALL OR CEILING MOUNTED SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK

ADJUSTABLE TIME-DELAY OVER A RANGE OF 1 TO 30 MINUTES.

SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH UL773A. SENSOR IS POWERED FROM POWER PACK. POWER PACK: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120 OR 277 VAC. AUTOMATIC LIGHT-LEVEL SENSOR ADJUSTABLE FROM 2 TO 200 FC (21.5 TO 2152 LUX); TURN LIGHTS OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.

DUAL SENSOR TYPE: DETECT OCCUPANCY AREA USING PIR (PASSIVE INFRA-RED) AND ULTRASONIC DETECTION METHOD.

LEGEND

SYMBOLS	DESCRIPTION	MOUNTING
φ	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
\P	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	42" AFF OR 6" ABOVE COUNTER TOP
₩	QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
₩ _{AC}	QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	42" AFF OR 6" ABOVE COUNTER TOP
₩	DUPLEX RECEPTACLE TOP HALF SWITCHED, 120V, 20A, NEMA 5-20R	18" AFF
Ф	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	FLUSH WITH FINISHE FLOOR
Φ	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	IN CEILING
\Diamond	SPECIAL RECEPTACLE, CONFIGURATION AND ELECTRICAL CHARACTERISTIC AS NOTED ON DWG	18" AFF
φ	JUNCTION BOX FLUSH IN WALL WITH COVER. SIZE PER NEC.	18" AFF
0)	JUNCTION BOX FLUSH IN CEILING WITH COVER. SIZE PER NEC.	IN CEILING
J	JUNCTION BOX FLUSH IN FINSHED FLOOR WITH COVER. SIZE PER NEC.	FLUSH WITH FINISHE FLOOR
φ	TV OUTLET	SAME HEIGHT AS ADJACENT POWER OUTLET
▼	TELEPHONE OUTLET	18" AFF
₩.	TELEPHONE OUTLET. SUBSCRIPT: F - FIREMAN'S PHONE, H - HOUSE PHONE, P - PAY PHONE	42" AFF OR 6" ABOVE COUNTER TOP
4	TELEPHONE / DATA COMBINATION OUTLET	18" AFF
4	TELEPHONE / DATA COMBINATION OUTLET	42" AFF OR 6" ABOVE COUNTER TOP
∇	DATA OUTLET	18" AFF
\forall	DATA OUTLET	42" AFF OR 6" ABOVE COUNTER TOP
@/@-	SMOKE DETECTOR. CEILING / WALL MOUNTED	CEILING / 80" A
(i)- / (i)-	INFRARED BEAM SMOKE DETECTOR. TRANSMITTER/RECEIVER.	AFF N
@/@-	HEAT DETECTOR. CEILING/WALL MOUNTED	CLUNG / 80" AFF
⟨FŜ>	FLOW SWITCH	
⟨Ţŝ⟩	TAMPER SWITCH	
×	FIRE ALARM NOTIFICATION DE ICE. AUDIO A VISUAL.	80" AFF
×	FIRE ALAM NOTIFICATION DEVICE. AUDIO.	80" AFF
Ä	FIRE ALARM NO. CAT ON DEC. VISUAL.	80" AFF
	FIRE LARM INITIATION EVICE. PULL STATION.	42" AFF
Allian.	3D SEADER	42" AFF
\$ 1111111	SWITC	42" AFF
\$3	WITCH - 3 WAY	42" AFF
Ф	SWITCH - WALL MTD, DIMMING	42" AFF

SWITCH - WALL MTD, INTEGRAL OCCUPANCY SENSOR AND DIMMING

POLES / ENCLOSURE

SHUNT TRIP ASSEMBLY

PUSH BUTTON SWITCH

CONDUCTOR TURNING DOWN/UP

SCHEDULE

MOTOR

CONDUIT

ΛMY

М

(ST)

0

./.

DISCONNECT SWITCH, SUBSCRIPT: AMP / # OF

FUSED DISCONNECT SWITCH. SUBSCRIPT: AMP / #
OF POLES / ENCLOSURE / FUSE

ELECTRICAL PANELBOARD. REFER TO PANELBOARD SCHEDULE.

ELECTRICAL PANELBOARD. REFER TO PANELBOARD

MAGNETIC DOOR HOLD OPEN DEVICE CONNECTEI TO FACP, DOOR RELEASED CLOSED IN THE EVENT OF ALARM.

HOME RUN WITH WIRE TICKS, XX - PANEL DESIGNATION, # - CIRCUIT DESIGNATION, WIRE TICKS - (1) NEUTRAL, (3) HOT & (1) GROUND •

EQUIPMENT AS NOTED ON DRAWING.

42" AEE

AS INDICATED ON DWO

AS INDICATED ON DV

SURFACE MOUNTED

FLUSH WITH WALL

GENERAL NOTES

ALL EXIT SIGNS, NIGHT LIGHTS AND EMERGENCY BALLAST CHARGING CIRCUITS SHALL BE CONNECTED TO UNSWITCHED PORTION OF LIGHTING CIRCUIT SHOWN

FIXTURE TYPE INDICATED BY UPPER CASE CHARACTERS, SWITCHING AND GROUPING

DESIGNATED BY LOWER CASE LETTER AND CIRCUIT BY NUMBER (WHERE APPLICABLE) WHEN CONDUCTOR OR CONDUIT SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR AND CONDUIT SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT.

REFER TO THE ARCHITECTURAL/INTERIORS DOCUMENTS FOR ACTUAL DEVICE LOCATIONS

REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS OF THE DOCUMENTS, WHICH REQUIRE ELECTRICAL SERVICE.

REFER TO APPROPRIATE DRAWINGS AND MANUFACTURER'S INSTALLATION MANUAL TO PROVIDE ALL SUPPLEMENTARY AND CONTROL CIRCUITS TO BRING EQUIPMENT TO FULL WORKING CONDITION.

EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS.

WALL SWITCHES CONTROLLING CIRCUITS OF OPPOSITE PHASES SHALL NOT BE INSTACOMMON BOX UNLESS PERMANENT BARRIER IS PROVIDED.

ALL RACEWAY AND EQUIPMENT SUPPORTS AND HANGERS SHALL BE FULLY COOR WITH STRUCTURAL DRAWINGS.

REFER TO THE ARCHITECTURAL/INTERIORS REFLECTED CEILING P PLACEMENT AND DIMENSIONS.

REFER TO THE ARCHITECTURAL/INTERIORS DOCUMENTS AND DIMENSIONS. FIELD VERIFY LAYOUT THE EXIST PRIOR TO BEGINNING INSTALLATION.

SEE HVAC DRAWINGS FOR LOCATIONS OF FA

COORDINATE WITH CUTSHEETS A ONAL CONTROL CIRCUITS

NS OF EQUIPMENT, FIXTURES AND EILING PLANS, REFER TO TON CHANGES AND RACEWAY

ELECTRICAL AND TELEPHONE SERVICES.

F A FIRE RESISTANT RATED ASSEMBLY BY A PIPE, TUBE WIRE OR OTECTED BY A THROUGH PENETRATION FIRE STOP SYSTEM THAT CORDING TO ASTM E814 OR E199.

PTACLES, SWITCHES, OUTLETS, ETC. SHALL NOT BE INSTALLED BACK TO RESISTANCE RATED WALLS. THEY SHALL BE AT LEAST 24-INCHES APART.

ABBREVIATIONS

AC	6" ABOVE COUNTER SPACE OR 42" AFF	IG	ISOLATED GROUND	
AF	AMP FUSE	ISC	SHORT CIRCUIT CURRENT	
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING	
AL	ALUMINUM	MTD	MOUNTED	
BFC	BELOW FINISHED CEILING	N	NEUTRAL	
BKR	BREAKER	NL	NIGHT LIGHT	
CND	CONDUIT	NEC	NATIONAL ELECTRICAL CODE	
CONN	CONNECTED OR CONNECTION	PNL	PANEL	
СТВ	CABLE TV TERMINAL BACKBOARD	RECPT	RECEPTACLE	
CU	COPPER	TEL	TELEPHONE	
DN	DOWN	ттв	TELEPHONE TERMINAL BOARD	
EC	EMPTY CONDUIT	TV	TELEVISION	
ELEC	ELECTRICAL	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR	
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL	
FAA	FIRE ALARM ANNUNCIATOR PANEL	XFMR	TRANSFORMER	
G OR GRND	GROUND	UG	UNDERGROUND	
GFCI OR GF	GROUND FAULT CIRCUIT INTERRUPTER	WP	WEATHERPROOF	





OFFICE entre Utera et Grenner 770,424,5030 errent-Gibber CHIROPRACTIC

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104 INNOVATION

PINE MOUNTAIN RD. SUITE KENNESAW, GA 30152 OMPOUNDING DR. SHAWN HODGES Ŏ 6095

REVISIONS:						
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