ELECTRICAL SYMBOLS AND SCHEDULE

LIGHTING

SYMBOL	DESCRIPTION	MTG HT
	FIXTURE RECESSED MOUNTED	CEILING
	FIXTURE SURFACE MOUNTED	CEILING
	STRIP TYPE FIXTURE	
	STRIP TYPE FIXTURE	
	WALL MOUNTED STRIP TYPE FIXTURE	WALL
	ROUND DOWN LIGHT TYPE LIGHT FIXTURE	CEILING
	WALL MOUNT FIXTURE	WALL
	PENDANT TYPE LIGHT FIXTURE	
	HIGHBAY TYPE LIGHT FIXTURE	
	TRACK LIGHTING WITH HEADS SPACED AS INDICATED	
	EXIT LIGHT FACE/DIRECTIONAL ARROWS AS INDICATED	WALL
	EXIT LIGHT FACE/DIRECTIONAL ARROWS AS INDICATED	CEILING
	EXIT LIGHT WITH EMERGENCY HEADS DIRECTION ARROWS AS INDICATED	WALL
	EXIT LIGHT WITH EMERGENCY HEADS DIRECTION ARROWS AS INDICATED	CEILING
	LIGHT FIXTURE ON EMERGENCY CIRCUIT	CEILING
	SELF CONTAINED EMERGENCY LIGHT UNIT	
	DOWNLIGHT ON EMERGENCY CIRCUIT	
	EXTERIOR POLE MOUNTED LIGHT FIXTURE	GRADE
	EXTERIOR BOLLARD TYPE LIGHT FIXTURE	GRADE

LIGHTING CONTROL

SYMBOL	DESCRIPTION	MTG HT
	SINGLE POLE SWITCH – LETTER INDICATES SWITCH LEG	46"
	DOUBLE POLE, 3-WAY AND 4-WAY SWITCHES	46"
	EXPLOSION PROOF SWITCH	46"
	EMERGENCY SWITCH	46"
	LOW VOLTAGE SWITCH	46"
	PILOT LIGHT SWITCH	46"
	KEY OPERATED SWITCH	46"
	LIGHTED TOGGLE SWITCH	46"
	MOMENTARY CONTACT SWITCH	46"
	DIMMER – LETTER DENOTES TYPE – SEE SPECIFICATIONS	46"
	LINE VOLTAGE RELAY	
	TIME SWITCH AS NOTED OR SPECIFIED	
	CONTACTOR PROVIDE # OF POLES AS NOTED	
	OCCUPANCY SENSOR "X" DENOTES TYPE – SEE SPECIFICATIONS	CEILING
	OCCUPANCY SENSOR WALL SWITCH BOX MOUNTED	46"
	PHOTOSENSOR	

POWER

SYMBOL	DESCRIPTION	MTG HT
WP SS CP GFCI	DUPLEX RECEPTACLE WP INDICATES WEATHER-RESISTANT RECEPT W/ NEMA-3R IN-USE COVER SS INDICATES STAINLESS STEEL FACEPLATE CP INDICATES CHILDPROOF RECEPTACLE GFCI INDICATES GROUND FAULT CIRCUIT INTERRUPTER	18"
	FOURPLEX RECEPTACLE	18"
	SIMPLEX RECEPTACLE	18"
	CEILING MOUNT DUPLEX RECEPTACLE	
	LOWER HALF OF DUPLEX RECEPTACLE TO BE SWITCHED	18"
	ENTIRE DUPLEX RECEPTACLE SHALL BE SWITCHED	18"
	DUPLEX RECEPTACLE SHALL BE MOUNTED HORIZONTALLY	18"
	SPECIAL PURPOSE RECEPTACLE TYPE AS NOTED	18"
	SPECIAL PURPOSE RECEPTACLE TYPE AS NOTED	CEILING
	RECESSED JUNCTION BOX WITH FLEX CONNECTION	CEILING
	RECESSED JUNCTION BOX	CEILING
	SURFACE MOUNTED JUNCTION BOX	CEILING
	RECESSED JUNCTION BOX	WALL
	SURFACE MOUNTED JUNCTION BOX	WALL
	FLOOR BOX WITH DEVICES INDICATED	FLOOR
PB	PULLBOX SIZE AS REQUIRED OR NOTED	

POWER DISTRIBUTION

SYMBOL	DESCRIPTION	MTG HT
	GROUND	
M	METER	
MH	MANHOLE	
HH	HANDHOLE	
	PANELBOARD	
	DISTRIBUTION PANELBOARD SURFACE MOUNTED	WALL OR FLOOR
	SWITCHBOARD SURFACE MOUNTED	WALL OR FLOOR
CT	CT CABINET	
T	UTILITY CO. TRANSFORMER	GRADE
T	TRANSFORMER	

MOTORS

SYMBOL	DESCRIPTION	MTG HT
	PUSHBUTTON – SINGLE	
	PUSHBUTTON – DOUBLE	
	PUSHBUTTON – TRIPLE	
	TOGGLE SWITCH – MOTOR RATED	
	SWITCH / FUSE ASSEMBLY	
	SWITCH / THERMAL OVERLOAD	
	THERMOSTAT	60"
	COMBO MOTOR STARTER/DISCONNECT SWITCH	
	MAGNETIC CONTACT	
	MOTOR	
	MOTOR WITH ELECTRICAL CONNECTION; REFER TO MOTOR SCHEDULE (MECHANICAL EQUIPMENT CROSS REFERENCE)	
	NON-FUSED DISCONNECT SWITCH	
	FUSED DISCONNECT SWITCH	
	MOTOR STARTER	
	HAND/HAIR DRYER CONNECTION	VERIFY
	MUSHROOM HEAD PUSHBUTTON	
	FAN FORCED HEATER	
	BASEBOARD HEATER	
	EQUIPMENT CONNECTION	
	HEAT TAPE	

CABLING

SYMBOL	DESCRIPTION	MTG HT
	CONDUIT RUN EXPOSED	
	CONDUIT RUN IN OR BELOW FLOOR, OR UNDERGROUND (UG)	
	WIRE COUNTS SHOWN WHEN MORE THAN 2 IN CONDUIT (NOT INCLUDING GROUND)	
	HOME RUN TO PANELBOARD	
	CONDUIT SLEEVE	
	CONDUIT STUB	
D	DATA	
F	FIRE	
I	INTERCOM	
S	SOUND	
T	TELEPHONE	
XX	CUSTOM	

FIRE ALARM

SYMBOL	DESCRIPTION	MTG HT
FACP	FIRE ALARM CONTROL PANEL	
FAA	FIRE ALARM ANNUNCIATOR PANEL	
	MAGNETIC DOOR HOLD OPEN	
	FIRE ALARM BELL	
	FIRE ALARM HORN	90"
	FIRE ALARM SPEAKER	90"
	FIRE ALARM STROBE	90"
	FIRE ALARM HORN/STROBE	90"
	FIRE ALARM SPEAKER/STROBE	90"
	FIRE ALARM CEILING HORN	CEILING
	FIRE ALARM CEILING SPEAKER	CEILING
	FIRE ALARM CEILING STROBE	CEILING
	FIRE ALARM CEILING HORN/STROBE	CEILING
	FIRE ALARM CEILING SPEAKER/STROBE	CEILING
	FIRE/SMOKE DAMPER	
	FIRE ALARM ADDRESSABLE MODULE	
	FIRE ALARM PULL STATION	42"
	FIRE ALARM SMOKE DETECTOR – PHOTOELECTRIC	CEILING
	FIRE ALARM SMOKE DETECTOR – IONIZATION	CEILING
	FIRE ALARM DUCT DECTECTOR	
135 200 R CR	FIRE ALARM HEAT DETECTOR 135 INDICATES 135 FXD HEAT DETECTOR 200 INDICATES 200 FXD HEAT DETECTOR R INDICATES 135 ROR HEAT DETECTOR CR INDICATES 200 ROR HEAT DETECTOR	CEILING
	FIRE SPRINKLER TAMPER SWITCH	
	FIRE ALARM FLOW SWITCH	

COMMUNICATIONS

SYMBOL	DESCRIPTION	MTG HT
	TELEPHONE	18"
	TELEPHONE – WALL HUNG	
	COMMUNICATIONS BOARD SIZE AS INDICATED	
	DATA OUTLET	
	DATA – CEILING MOUNTED	
	COMBINATION PHONE/DATA OUTLET	
	BUZZER	
	BELL	
C	CHIME	
TV	AUDIO/VISUAL OUTLET 4SQ BOX WITH BLANK PLATE – WALL MOUNT	
TV	AUDIO/VISUAL OUTLET 4SQ BOX WITH BLANK PLATE – CEILING MOUNT	

SECURITY

SYMBOL	DESCRIPTION	MTG HT
	SECURITY CARD READER (PROXIMITY READER)	
	SECURITY ELECTRIC STRIKE	
	SECURITY ELECTRIC LATCH	
	SECURITY MAGNETIC CONTACT	
	SECURITY KEYPAD	
	CCTV VIDEO CAMERA – CEILING MOUNTED	
	CCTV VIDEO CAMERA – WALL MOUNTED	

NOTES:
1. THESE SYMBOLS COMPRISE A STANDARD LIST; ALL SYMBOLS MAY NOT APPEAR ON THIS PROJECT.
2. MOUNTING HEIGHTS SHOWN ARE STANDARD AND SHALL BE USED UNLESS INDICATED OTHERWISE. MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE, UNLESS INDICATED OTHERWISE.

ABBREVIATIONS

A	AMPERES	M MAX	MOTOR STARTER OPERATING COIL MAXIMUM
AC	ABOVE COUNTER	MCM	THOUSAND CIRCULAR MILS
ACK	ACKNOWLEDGE	MCP	MOTOR CIRCUIT PROTECTOR
AM	AMMETER	MECH	MECHANICAL
ANN	ANNUNCIATOR	MFR	MANUFACTURER
AS	AMMETER SWITCH AMERICAN	MH	METAL HALIDE
AWG	WIRE GAGE	MIN	MINUTE OR MINIMUM
BKR	BREAKER	MTD	MOUNTED
BLDG	BUILDING		
CKT	CIRCUIT	NF	NON-FUSED
℄	CENTER LINE	NC	NORMALLY CLOSED
CO	CONVENIENCE OUTLET	NO	NORMALLY OPEN
CONN	CONNECTIONS	NTC	NOT CONNECTED
CONTR	CONTRACTOR		
CP	CONTROL PANEL	OL(S)	OVERLOAD RELAY CONTACT(S)
CPT	CONTROL POWER TRANSFORMER		
CS	CONTROL STATION	PF	POWER FACTOR
CT	CURRENT TRANSFORMER	PVC	POLYVINYLCHLORIDE CONDUIT
CU	COPPER		
DE	DUAL ELEMENT	REQ'D	REQUIRED
DISC	DISCONNECT	RS	RIGID STEEL CONDUIT
DP	DISTRIBUTION PANEL	RTM	RUNNING TIME METER
		SDS	SPECIFIED IN OTHER DIVISION OF SPECIFICATIONS
ELEC	ELECTRICAL	SE	SERVICE ENTRANCE
EMT	ELECTRICAL METALLIC TUBING	SEC SIG	SECOND OR SECONDARY SIGNAL
EP	EXPLOSION PROOF	SOL Vv	SOLENOID VALVE
EQUIP	EQUIPMENT	SP	SINGLE POLE
		SPECS	SPECIFICATIONS
F & I	FURNISH AND INSTALL	SSNR	"SOFT START" NON-REVERSING
FU	FUSE OR FUSIBLE	SSR	"SOFT START" REVERSING
		SW	SWITCH
GFI	GROUND FAULT INTERRUPTER		
GND	GROUND		
GRS	GALVANIZED RIGID STEEL CONDUIT	TD	TIME DELAY
		TEMP	TEMPERATURE
HD	HEAVY DUTY	T'STAT	THERMOSTAT
HOR	HORIZONTAL		
HP	HORSEPOWER		
HPS	HIGH PRESSURE SODIUM	UH	UNIT HEATER
HTR	HEATER		
HZ	HERTZ (CYCLES/SECOND)	V	VOLTS
		VM	VOLTMETER
IMC	INTERMEDIATE METAL CONDUIT	VS	VOLTMETER SWITCH
INCAND	INCANDESCENT	Vv	VALVE
IND	INDICATING OR INDICATOR		
JB	JUNCTION BOX	W	WATTS OR WIRE
		W/	WITH
kVA	KILOVOLT-AMPERES	WHM	WATT-HOUR METER
kVAR	KILOVOLT-AMPERES REACTIVE	WM	WATT METER
kW	KILOWATTS	WW	WIREWAY
		WP	WEATHERPROOF
LT	LIGHT	XFMR	TRANSFORMER
LMF	LIQUID-TIGHT METALLIC CORE FLEXIBLE CONDUIT		

ELECTRICAL DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
E-000	ELECTRICAL SYMBOLS & GENERAL NOTES
E-100	LIGHTING PLAN
E-200	POWER PLAN
E-300	ELECTRICAL RISER DIAGRAM & SCHEDULES
E-400	ELECTRICAL DETAILS
E-500	ELECTRICAL SPECIFICATIONS
EMS-1	EMS SPECIFICATIONS & DETAILS

GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS AND OWNER PROVIDED DRAWINGS FOR LOCATION OF LIGHTING FIXTURES AND DEVICES.
2. LETTER THUS: 'A' – INDICATES TYPE OF LIGHTING FIXTURES. REFER TO LIGHTING FIXTURE TYPES AS NOTED ON THE LIGHTING FIXTURE SCHEDULE.
3. DATA TELEPHONE AND TELEVISION CONDUIT SHALL BE MINIMUM 3/4 INCH UNLESS OTHERWISE NOTED ON DRAWINGS.
4. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
5. FINAL CONNECTIONS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
6. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A PULLWIRE OR EQUAL AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL, AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
7. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO APPROVE METHODS AND MATERIALS NOT REFLECTED HEREIN.
8. CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND SHALL PROVIDE SWITCHES, RECEPTACLES, TELEPHONE OUTLETS, EQUIPMENT CONNECTIONS, ETC., AND ASSOCIATED CONDUITING IN NEW AND REMODELED AREAS, EVEN IF SUCH AREAS ARE NOT SHOWN ON ELECTRICAL DRAWINGS. LAYOUTS, FIXTURE TYPES, QUANTITIES, AND SPACING SHALL BE IN ACCORDANCE WITH SIMILAR AREAS ON THIS PROJECT. CONTRACTOR SHALL INCLUDE COSTS FOR THE ABOVE IN HIS BID.
9. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE OWNER.
10. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE OF GEORGIA, AND NATIONAL CODES AND ORDINANCES.
11. PROVIDE PERMITS AND INSPECTIONS REQUIRED.
12. GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
13. VERIFY THE EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
14. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING OR FACTORY WIRING IN EQUIPMENT PROVIDED BY THIS CONTRACTOR.
16. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC. SHALL BE CONNECTED AND OPERABLE.
17. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH PVC JACKET OR PROVIDED EQUAL PROTECTION. EMT FITTINGS SHALL BE MALLEABLE IRON OR STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE.
18. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, AND OTHER VIBRATING EQUIPMENT SHALL BE WITH LIQUID-TIGHT FLEX METAL CONDUIT AND FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
19. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING FACILITY.
20. ELECTRICAL CONTRACTOR SHALL PROPERLY BALANCE ALL BRANCH CIRCUITS BETWEEN ALL PHASES OF THE SYSTEM, REGARDLESS OF CIRCUITING INDICATED.
21. MULTI-PHASE LOADS SHALL BE PROTECTED BY MULTI-POLE CIRCUIT BREAKERS HAVING COMMON TRIP AND SINGLE HANDLE. HANDLE TIES AND TROUGH CLIPS OR PINS ARE UNACCEPTABLE.
22. MULTI-WIRE BRANCH CIRCUITS SHALL REQUIRE A MULTI-POLE BREAKER AS A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES PER NEC 210.4(B).
23. ALL CONDUCTORS SHALL BE COPPER, TYPE 75 DEGREES C, MINIMUM SIZE #12.
24. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL WORK WITH OTHER TRADES AND ARCHITECTURAL DRAWINGS TO ELIMINATE CONFLICTS.
25. CONTRACTOR SHALL MAKE ARRANGEMENTS WITH LOCAL POWER COMPANY FOR THE INSTALLATION OF NEW ELECTRICAL SERVICE AND METER. INSTALL NEW SERVICE DISTRIBUTION EQUIPMENT AS SPECIFIED ON ELECTRICAL DRAWINGS.
26. ELECTRICAL DEVICES AND COVER-PLATES SHALL BE WHITE, DEVICES AND COVER-PLATES WITHIN THE ACCENT COLOR ON THE WALL SHALL BE WHITE, ALL OTHER ELECTRICAL DEVICES AND COVER-PLATE SHALL BE WHITE.
27. CONTRACTOR IS RESPONSIBLE TO SECURE AND PAY FOR ALL PERMITS. CONTRACTOR SHALL COMPLY WITH ALL STATE, LOCAL, AND NATIONAL CODES (NEC). CONTRACTOR SHALL SCHEDULE INSPECTIONS SO JOB PROGRESS IS NOT DELAYED.
28. PRIOR TO CONSTRUCTION START CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND OPERATION MANUAL FOR ALL EQUIPMENT AND ACCESSORIES FOR OWNER APPROVAL.
29. PROVIDE FLEXIBLE CONDUIT FOR ALL VIBRATING EQUIPMENT. PROVIDE FLEXIBLE CONDUIT FOR LIGHT FIXTURE CONNECTIONS.
30. ELECTRICAL EQUIPMENT EXPOSED TO WEATHER CONDITIONS SHALL BE WEATHERPROOF TYPE. CONDUIT EXPOSED TO WEATHER CONDITIONS OR IN CONTACT WITH CONCRETE SHALL BE POLYVINYL CHLORIDE (PVC) OR GALVANIZED. HEAVY WALL STEEL (GRC).
31. CONTRACTOR SHALL SUBMIT AS BUILT DRAWINGS TO THE OWNER IF INSTALLATION VARIES FROM CONTRACT DRAWINGS.
32. FIELD VERIFY ALL ELECTRICAL CONDITIONS PRIOR TO BID. OWNER WILL NOT BE RESPONSIBLE FOR CHANGES DUE TO CONTRACTOR FAILURE TO VERIFY ELECTRICAL EQUIPMENT AND CONDITIONS.

REFER TO THE SHELL BUILDING DRAWINGS FOR ADDITIONAL AND SUPPLEMENTAL INFORMATION/REQUIREMENTS.

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Salem Gate Market

NORTHERN TOOL + EQUIPMENT

ANCHOR 2B
1454 OLD SALEM ROAD
CONYERS, GEORGIA

ELECTRICAL SYMBOLS AND GENERAL NOTES

Date:	Drawn By:	Sheet No.:
03/29/19	AK	E-000
Project No.: 18.112	Rev'd. By: AR	