

**Lighting Schedule**

Symbol	Manufacturer & Catalog Number	Description	Lamp Type & Quantity	Volts/Ballast	Mounting	Input Watts
A1	Lithonia Lighting, GT8	24" x 48" Recessed Parabolic Troffer, T8 Bulbs	Fluorescent/ 2 Bulb	120/ Elec.	Ceiling	64
E1	Lithonia Lighting, ECR LED M6	Exit and Egress Lighting Combo Fixture w battery back-up	LED/ 2 Bulb	120/ N/A	Ceiling	3.8
A2	Lithonia Lighting, BLTDR	12" x 48" Recessed Volumetric Troffer, 40L ADP LP330	LED / 1 Bulb	120/ N/A	Ceiling	34
E	Generic Exit Sign	Generic LED back lighted Exit Sign w battery back-up	LED / 1 Bulb	120/ N/A	Ceiling	1.2
A3	Lithonia Lighting, TWR1	Wall Pack Outdoor duty, TWR1 2/42TRT 120 PE LP1	CFL / 2 Bulb	120/ Elec.	Wall	84

North Carolina Energy Code Compliance, Section 505	Total Watts:	451
	Total Square Feet:	760
	Allowable watts / per square foot:	1
	Calculated watts / per square foot:	0.58

**Existing TBD Amp Service Switch Load Justification, per NEC 220.87, pg 70-69**

Duke Meter # ZG0077532698X13  
 Existing Demand 18.22 KWD @125% = 23 KVA  
 New connected KVA on 200 Amp Service Switch = 6.27 KVA  
 Total KVA utilized post construction = 31.27 KVA  
 Average Load per Phase = 66 Amps

KVA Peak Per Duke Energy Engineer

**Energy Code Compliance**  
**Section 505, Electrical Systems and Equipment**

Method of Compliance:  Prescriptive  Performance  Energy Cost Budget

Lighting Schedule:  
 See "Lighting Fixture Schedule"  
 See "Load Tabulation"

Equipment Schedules with Motors (Not used with mechanical systems):  
 See "Motor (Less HVAC) Schedule"

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina State Energy Code.

Signed: *H. R. Bailey*  
 Name: Hakeem R. Bailey, P.E.  
 Title: Principal Design Engineer

- General Installation Requirements**
- All installation work will be completed during normal business hours, exceptions will be made.
  - Competitive equipment may be used in lieu of models specified.
  - Drawing are diagrammatic, contractor will verify equipment positions and adjust power and controls conduit path accordingly.
  - Support conduit per NEC 2014
  - Coordinate installation with other trades.
  - All wire must 75 deg C rated or higher, THW, THHW

Panelboard "B" Location: Electrical Room Type: Distribution  
 Voltage: 120/208V, 3 ph, 4W

Load Service	kVA	Wire Size	Ckt No.	Phase	Load	Wire Size	Ckt No.	Phase	Load
Spares	2.0	12	1	A	2	12	1	A	Tractor
Engine Shore Power	2.0	12	3	B	4	12	3	B	Fluorescent
Spares	2.0	12	5	C	8	12	5	C	Lighting
Generator	2.0	12	7	A	3	12	7	A	Generator Day Tank
Generator	2.0	12	9	B	10	12	9	B	Generator Receptacles
Exhaust Fan	2.0	12	11	C	12	12	11	C	Generator Battery charger
Gas Shut Off	2.0	12	13	A	14	12	13	A	AC Timer Relay
Spares	2.0	12	15	B	16	12	15	B	Shower
Fluorescent	2.0	12	17	C	18	12	17	C	Spares
Door Heat Interlock	2.0	12	19	A	20	12	19	A	Washroom lighting
Spares	2.0	12	21	B	22	12	21	B	Washroom Callerd Egress
Weight Room Regl. & Exhaust Fan	1.8	12	23	C	24	12	23	C	Washroom Exterior Lighting
Spares	2.0	12	25	A	26	12	25	A	Spares
Spares	2.0	12	27	B	28	12	27	B	Spares
Spares	2.0	12	29	C	30	12	29	C	Spares
Spares	2.0	12	31	A	32	12	31	A	Panel "A"
Spares	2.0	12	33	B	34	12	33	B	Spares
Spares	2.0	12	35	C	36	12	35	C	Spares
RTU 1	1.8	12	37	A	38	12	37	A	Spares
RTU 1	1.8	12	39	B	40	12	39	B	Spares
RTU 1	1.8	12	41	C	42	12	41	C	Spares

**Conductor Sizing Table**

**For 120V - 20A Branch Circuits Only, Unless Otherwise Noted**

If distance A + B in feet is (see diagram below)	Use copper wire in metallic conduit, AWG size as follows on entire circuit and size conduit accordingly
0' to 100'	#12 (min.)
100' to 175'	#10
175' to 300'	#8
300' to 450'	#6 (max.)

**For 277V - 20A Branch Circuits Only, Unless Otherwise Noted**

If distance A + B in feet is (see diagram below)	Use copper wire in metallic conduit, AWG size as follows on entire circuit and size conduit accordingly
0' to 250'	#12 (min.)
250' to 400'	#10
400' to 700'	#8
700' to 1000'	#6 (max.)

These tables are based on an evenly distributed load allowing 3% voltage drop at last outlet.

- Electrical Installation Requirements**
- All electrical work must be done by a NC licensed electrician.
  - All electrical work must comply with the NEC 2014
  - Wire connection shall be twist tied with appropriate sized cap.
  - Light fixtures shall be recessed within ceiling grid unless otherwise specified.
  - Light fixtures shall be properly supported using hanging wire systems.
  - All electric materials, devices, appliances and equipment shall be label-listed.
  - Contractor will run conduit and cable to power, receptacles, lighting, bathroom vent fan and package unit for the new building addition.
  - Contractor to provide and install a NEMA 3R 240V, 50-Amp disconnect (DS-1) with 25amp fuse on packaged air conditioning units.
  - Contractor to remove exterior lighting fixtures where new building section is to be constructed. The salvaged lighting fixtures may be reused if in good condition.

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**Revisions**

No.	Date	Descrip.

ADDITION FOR  
 City of Charlotte  
 Engineering & Property Management  
 CFD  
 FIRE STATION 15  
 3617 FRONTENAC AVENUE  
 CHARLOTTE, NC 28215

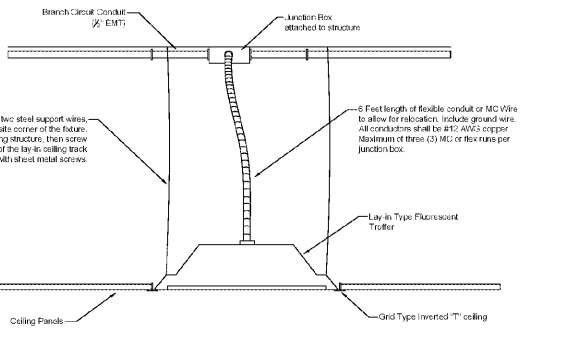
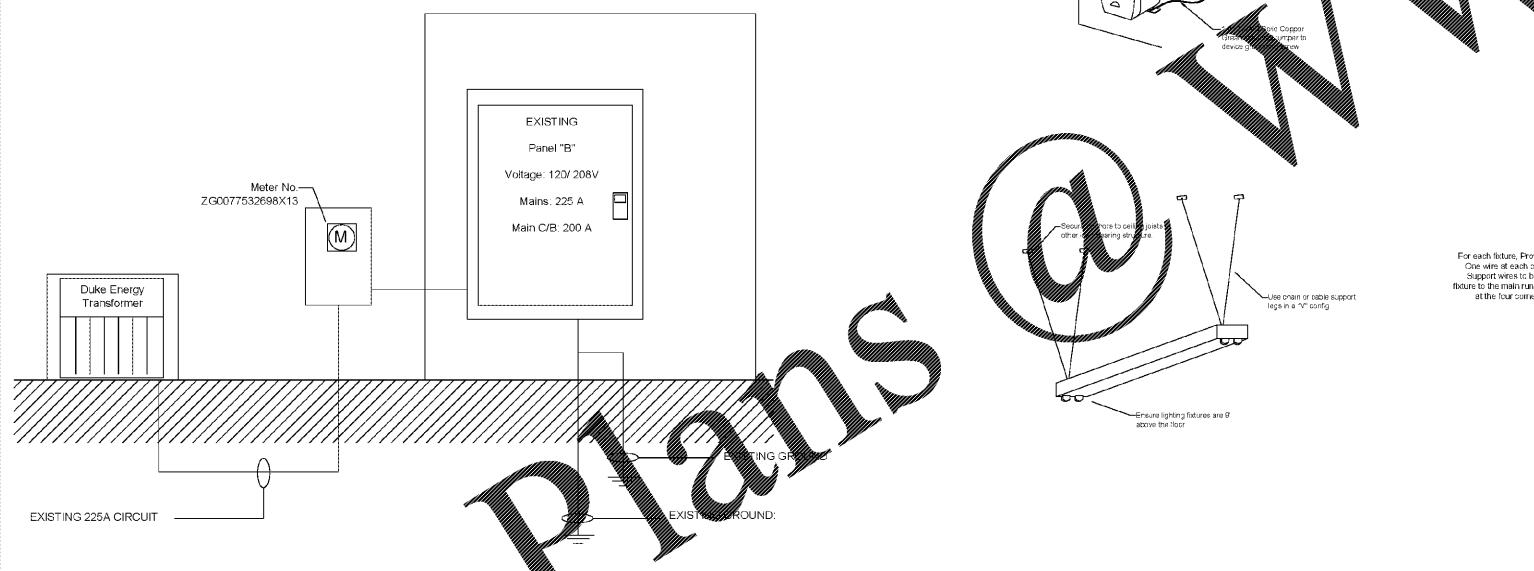


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Electrical Schedules

SHEET TITLE  
**E0.1**  
 SHEET NUMBER  
 PROJECT# 18060205  
 DATE 12/05/2019



**Legends, Symbols & Icons**

Lighting fixture, fixture with 4 bulb, see schedule for details	Emergency exit sign, see schedule for details	Panelboard, see schedule for details	Outlet - Box - Relay	Duplex Outlet, 15 Amp, 3W, 125V, Flush mounted	Switch, inline, 125V, single pull, flush mounted	Conduit and wire for power
Lighting fixture, fixture with 2 bulb, see schedule for details	Emergency exit sign and egress lighting, see schedule for details	Transformer, dry type, see schedule for details	Junction Box	Quad Outlet, 15 Amp, 3W, 125V, Flush mounted	Switch, inline, 125V, three way, flush mounted	Conduit and wire concealed under floor
Lighting fixture, flush pressure wash, see schedule for details	Emergency notification appliance	Motor, Type 1, see schedule for specs	Disconnect Box, see specs for details	Duplex Outlet, 20 Amp, 3W, 125V, NEMA 5-20R	Switch, inline, low voltage, single pull, flush mounted	Low voltage control wire
Lighting fixture, recessed, see schedule for details	Emergency pull station	Motor controller, Type 1, see schedule for specs	Automatic transfer switch, see specs for details	Duplex Outlet, 30 Amp, 3W, 125V, NEMA 14-30R	Switch, inline, 125V, double pull, flush mounted	Home run to panelboard
Lighting fixture, directional, single bulb, see schedule for details	Power supply meter	Combination motor controller & disconnect, Type 1, see schedule for specs	Data Communications Outlet	Duplex Outlet, 60 Amp, 3W, 125V, NEMA 14-60R	Switch, inline, 125V, 4 way, flush mounted	Empty Conduit
Lighting fixture, recessed, single bulb, see schedule for details	Emergency annunciator appliance	Combination motor controller & circuit breaker, Type 1, see schedule for specs	Residential Telephone jack, typ	GFCI Duplex Outlet, 15 Amp, 3W, 125V, Flush Mount	Switch, inline, 125V, key operated, flush mounted	Non-metallic cable (romex type) wiring
	Lighting fixture, miscellaneous, see schedule for details	Push button station, momentary contact	Smoke detector, see specs for details	GFCI Duplex Outlet, 15 Amp, 3W, 125V, WF, Outdoor Duty	Switch, door operated see spec for details	Connect to existing at this point
		Push button station, maintained contact	Audible horn or annunciator, see specs for details	Outlet - Box - Mounted Dimmer	Switch, momentary contact	Remove to this point
		Hand - Off - Auto type, motor control unit	AV Outlet	Outlet - Box - Mounted Switch and Dimmer	Occupancy Sensor and Switch	Key Note Icon