



Chick-fil-A

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3-15-22

CHICK-FIL-A DELRAY

1800 S. FEDERAL HIGHWAY
DELRAY BEACH, FL 33830

FSU# 3146

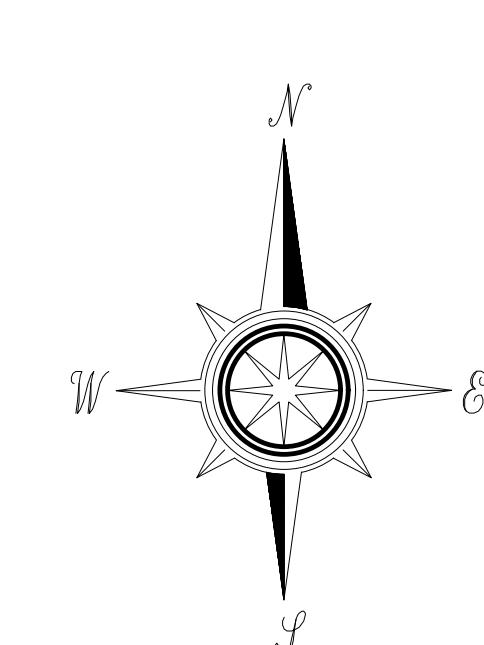
Schedule								
Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
∞	EX	7	GARDO LIGHTING (EXISTING SITE LIGHTING)	EMCO-ECA18-FH-400PSMH-120				

EXISTING SITE LIGHTING WAS MODELED OFF ORIGINAL PERMIT DRAWINGS. THE FIXTURES ARE MOUNTED ON 20' POLES WITH A CONCRETE POLE BASE 6" ABOVE FINISHED GRADE.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone	+	2.5 fc	18.4 fc	0.0 fc	N/A	N/A
CFA Lot Summary	×	5.0 fc	18.4 fc	0.2 fc	92.0:1	25.0:1
Parking Lot Summary	□	5.1 fc	17.4 fc	1.0 fc	17.4:1	5.1:1

PHOTOMETRIC PLAN

SCALE: 1" = 20'-0"



REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # RO.21039
PRINTED FOR Permit
DATE 10/27/2021
DRAWN BY
SHEET PHOTOMETRIC
PLAN
SHEET NUMBER

E1.2



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REVISION SCHEDULE
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ELECTRICAL SPECIFICATIONS
SHEET NUMBER

E2.2

SECTION C16124
SUPPORTING DEVICES AND HANGERS

PART 1 - PRODUCTS

1.01 ACCEPTABLE MANUFACTURERS
A. Supporting devices and hangers shall be manufactured by RACO Fasteners, or approved equivalent.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Secure conduits to within 3' of each outlet box, junction box, cabinet, fitting, etc., and at intervals not to exceed ten feet (10') and in accordance with the National Electric Code. In seismic zones, support conduits 1" and under at 6' intervals.

B. Install clamps secured to structure for feeder and other conduits routed against the structure. Use drop rods and hangers or racks to support conduits run apart from the structure.

C. Provide and install suitable angle iron, channel iron or steel metal framing with accessories to support or brace electrical equipment including safety switches, fixtures, panelboards, etc.

D. Use of chains, perforated iron, baling wire, or tie wire for supporting conduit runs is not permitted.

E. For support of low voltage wiring not required to be in conduit, bundle cables together in a neat manner using approved nylon tie wraps. Bundled cables shall be supported with "J" hooks on telephone type bridge rings, a minimum of 6 feet on center. Clearly identify all differing types of cables being run and tag with tape tags regarding telephone, POS System, music/communication, security, etc. for various system utilizing said cable. Identification tape shall be provided at minimum intervals of 25 feet on center and within each building space.

F. Provide a system of supporting devices and hangers to insure secure support or bracing for conduit, electrical equipment, including safety switches, fixtures, panelboards, outlet boxes, junction boxes, cabinets, etc.

SECTION C16140
WIRING DEVICES AND PLATES

PART 1 - PRODUCTS

1.01 WALL SWITCHES
a. Shall be purchased from the National Accounts Vendor indicated on the plans.

B. Ratings: 20 amps, 120/277 volts a.c. or as identified on drawings.

C. Devices: (Cooper/Arrow Hart catalog numbers are listed unless noted otherwise):

1. Single pole toggle switches:
20 AMP device - #AH1221-GY (Kitchen) or #AH1221-B (Dining)
20 AMP Pilot lights illuminated with load on - #AH1221-PL

2. Double pole toggle switches:
20 AMP device - #AH1222-GY (Kitchen) or #AH1222-B (Dining)

1.02 RECEPTACLES
A. Shall be purchased from the National Accounts Vendor indicated on the plans.

B. Devices: (Cooper/Arrow Hart catalog numbers are listed unless otherwise noted):

1. Specification grade devices (grey device color in Kitchen, brown device color in Dining, and orange for IG type) to be 20 amp, 125 volts, a.c. receptacles:

Single (simplex) device: #1877-GY (Kitchen) or #1877-B (Dining)
Duplex device: #CR20-GY (Kitchen) or #CR20-B (Dining)
Tamper Resistant duplex: #TRCR20-B (Vestibules & Play Area)
Tamper Resistant USB Charger duplex: #TR7756-B (Dining)
GF (ground-fault circuit interrupter) duplex device: #VGF20-GY (Kitchen) or #VGF20-B (Dining)
IG (isolated ground) duplex device: #IG5362-RN (orange face)

1.03 SPECIAL DEVICES
A. Manual motor starter switch: SQ. D Class 2510, Type F, for use on motors up to 3/4 horsepower. Provide NEMA 1 enclosure in dry locations; provide NEMA 3R enclosure in wet or exterior locations.

1.04 WALL PLATES
A. Provide Cooper/Arrow Hart, or approved equal, smooth satin stainless steel 302-SS series for switches and receptacles in the Kitchen areas. All other areas shall be brown Nylon plastic.

B. Provide blank plates on all outlet boxes for future outlets, or outlets without devices. Plate style shall match device plates.

C. Provide non-metallic weatherproof covers for duplex GF receptacles located outside or in wet locations that feature 'while-in-use' cover equivalent to Arrow Hart #WIU-1.

D. Where devices installed in exposed boxes or conduit fittings; provide properly designed plates and covers equal to Arrow Hart RS-Series exposed work covers.

E. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted boxes.

PART 2 - EXECUTION

2.01 INSTALLATION

- A. Mounting
 - 1. Mount switches and receptacles at height above finished floor as indicated on plans, and legend.
 - 2. Mount switches on strike side of door maximum 8" from door frame. Outlet box for switch shall be located clear of door frame. Coordinate with architectural plans prior to rough-in.
 - 3. Install switches with off position down.
 - 4. Do not use the feed thru feature for the GF Type receptacle, unless required by the plans.
 - 5. Use jumbo sized plates for outlets installed in masonry walls.
 - 6. Each receptacle shall be provided with a #12 green grounding jumper between the ground terminal of the receptacle and the outlet box.
 - 7. The grounding conductor to each receptacle shall be installed such that the removal of the device will not interfere with the continuity of the ground.
- B. Testing
 - 1. Test each switch and verify proper operation with energized circuit.
 - 2. Test each receptacle for proper polarity on energized circuit.
 - 3. Test each GF receptacle with a GF receptacle tester and verify circuit is opened by GF device at milli-ampere ranges established by the manufacturer.

SECTION C16440
PANELBOARDS

PART 1 - PRODUCTS

1.01 MANUFACTURER (via Chick-fil-A National Accounts Program)

- A. Siemens (West, Midwest, and Southwest Regions): from Suncoast Environmental Controls (SEC), Scott Dyer (877) 544-6679.
- B. Square-D (Northeast, Atlantic, and Southeast Regions): from Accu-Serv, Bob Harping (502) 961-0096.

1.02 PANELBOARD FEATURES

- A. Panelboards shall have a minimum symmetrical interrupting rating to meet or exceed the available symmetrical interrupting fault current at the device intended to interrupt current.
- B. Bus bars shall be copper or tin plated aluminum.
- C. Provide factory-installed copper ground bus in each panelboard with lugs or connectors on bar.
- D. Provide electrically isolated, factory installed, neutral bus in each 3 phase, 4 wire or 1 phase 3 wire panelboard.

3.01 EXAMINATION AND PREPARATION

- A. Coordinate exact locations of electrical service, utility transformer, metering equipment, service lateral, etc. prior to commencement of installation. Contact engineer with conflicts prior to bid.
- B. Ensure pad mounted transformer is not located within roadway or sidewalk.
- C. Coordinate with local electrical utility for all utility company requirements and provide for the following items and any others required by the utility:
 - 1. Concrete pad for utility transformer with required dimensions and details.
 - 2. Primary underground conduit, excavation, and backfill requirements.
 - 3. Pay for all fees associated with establishment of electrical service.
 - 4. Furnish list of loads to the electrical utility company serving the facility.
 - 5. Verify that utility company clearances are provided on all sides of utility equipment.
- D. Ensure proper access to utility equipment is maintained.
- E. Provide pull rope, excavation in accordance with electrical utility company requirements, backfill and concrete envelope for primary in accordance with electrical utility company requirements. Turn conduits up riser pole as required, cap spare conduits 12 inches above grade with plumbers pipe cap.
- F. Provide secondary lugs on utility transformer and perform drilling and installation of lugs in accordance with utility requirements. Type of lugs shall be in accordance with electrical utility company requirements.
- G. Connect service conductor to transformer secondary lugs as directed by electrical utility.

PART 2 - EXECUTION

2.01 INSTALLATION

- A. Panelboards shall be mounted at height above finished floor such that the height of the top-most breaker in the panel is not more than 6-1/2 feet above finished floor in its highest position per the NEC.

B. Where multiple panelboards are installed on walls in common areas of buildings, the panelboards shall be installed with the top of all panelboards at the same height.

C. Provide blank filler plates over all unused spaces in panelboards.

D. A typed directory card shall indicate devices being served and the space name where the device is located.

E. Provide minimum of one (1) 3/4" empty spare conduit for every 3 poles of spare breaker or space in the panelboard. Stub conduit to nearest accessible ceiling space. Label conduit as spare at panelboard and termination point.

F. Non-isolated ground bars shall be grounded to panelboard can and main service entrance ground bus with a code sized grounding conductor installed in the same conduit as the phase and neutral conductors.

G. Circuits using a common neutral shall be installed in accordance with the National Electrical Code.

H. Inspect each panelboard for proper installation, physical damage, tightness and installation of overcurrent devices. Verify proper color coding of conductors. Correct or repair all items found in inspection.

I. Neutral wires, ground wires, and isolated ground wires shall be connected to the appropriate panel bus bar. Do not mix bus wire connections.

SECTION C16441
ENCLOSED SWITCHES

PART 1 - PRODUCTS

1.01 MANUFACTURERS

A. Square D, General Electric, Siemens

1.02 ENCLOSURE SWITCHES

A. Nonfusible switch assemblies: NEMA KS 1, General Duty Type for 208 volt load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in on position.

B. Enclosures: NEMA KS 1.

1. Interior dry locations: Type 1.

2. Exterior locations: Type 3R.

- C. Provide energy saving Instant or Rapid Start lamps for all fluorescent fixtures.
- D. All lamps and ballasts shall meet or exceed the requirements of the National Energy Policy Act of 1992 and any other applicable Codes or Criteria.
- E. All components of recessed fixtures shall be accessible without disturbing fixture in or on ceiling.
- F. Energy saving ballasts and energy saving lamps provided shall be comparable for operation together.
- G. Exterior fixtures and poles shall be suitable for exterior use, shall be UL Listed, and shall be a standard design for exterior application.
- H. Exterior poles for fixtures with luminaires installed shall be designed for maximum constant velocity wind load with luminaires installed, applicable to the geographic area.

SECTION C16442
UTILITY SERVICE ENTRANCE AND DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 SYSTEM DESCRIPTION

A. The underground electrical system service characteristics shall be 208Y/120 volts, Three Phase, Four Wire service and shall extend from utility company transformer secondary.

B. Metering of electrical usage shall be located as required by local electrical utility company. Coordinate requirements with local utility company.

C. Distribution system originates at secondary of utility transformer and includes service entrance conduit and conductors, distribution equipment, lighting panelboards, utilization equipment, overcurrent devices, disconnecting means, controls, branch and feeder circuits, etc.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Furnish service entrance conduit, cable, and miscellaneous hardware as required by plans and specifications for electrical service entrance and system grounding at main electrical service.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

A. Coordinate exact locations of electrical service, utility transformer, metering equipment, service lateral, etc. prior to commencement of installation. Contact engineer with conflicts prior to bid.

B. Ensure pad mounted transformer is not located within roadway or sidewalk.

C. Coordinate with local electrical utility for all utility company requirements and provide for the following items and any others required by the utility:

- 1. Concrete pad for utility transformer with required dimensions and details.
- 2. Primary underground conduit, excavation, and backfill requirements.
- 3. Pay for all fees associated with establishment of electrical service.
- 4. Furnish list of loads to the electrical utility company serving the facility.
- 5. Verify that utility company clearances are provided on all sides of utility equipment.

D. Ensure proper access to utility equipment is maintained.

E. Provide pull rope, excavation in accordance with electrical utility company requirements, backfill and concrete envelope for primary in accordance with electrical utility company requirements. Turn conduits up riser pole as required, cap spare conduits 12 inches above grade with plumbers pipe cap.

F. Provide secondary lugs on utility transformer and perform drilling and installation of lugs in accordance with utility requirements. Type of lugs shall be in accordance with electrical utility company requirements.

G. Connect service conductor to transformer secondary lugs as directed by electrical utility.

SECTION C16500
LIGHTING FIXTURES (LUMINAIRES)

PART 1 - GENERAL

1.01 ACCEPTABLE MANUFACTURERS AND VENDORS

A. Lighting fixtures indicated on lighting fixture schedule are to be purchased from the National Account Vendor for the region of the project (verify region designation with Owner's Representative):

1. Accu-Serv Lighting - Atlantic region and Southeast region. Contact at Accu-Serv, Bob Harping at 877-707-7378, fax - 502-961-0357, email - bharping@accu-serv.com

2. Villa Lighting - Midwest region, Northeast region, Southwest region, and West region. Contact at Villa Lighting: Dave Christianell at 800-325-0963, fax 314-531-8720, email - dave.christianell@villalighting.com

B. Ballasts to be electronic ballast provided with lighting fixture by the manufacturer.

C. Lamps to be Osram-Sylvania and will typically be provided with the luminaire by the lighting manufacturer.

1.02 FIXTURE REQUIREMENTS

A. Provide regulating, HPS ballasts in all HID lighting fixtures. HID lamp types shall be as indicated on the drawings.

B. Recessed fluorescent lighting fixture ballasts shall be provided with integral thermal protection.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for system outlets as specified in Section 16141. Provide separate conduit to nearest accessible ceiling space from each outlet.

B. Cable shall be in conduit where installed in walls or inaccessible ceilings.

C. Minimum conduit size shall be 3/4".

PART 3 - EXECUTION

- 3.01 INSTALLATION**
 - A. Furnish and install conduits, junction boxes, outlet boxes, and plates.
 - B. Provide one #10 equivalent nylon pull wire in each system empty conduit.
 - C. Provide a complete raceway system in accordance with interior system vendor requirements. Interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.
 - D. Final connection and testing of systems will be provided by the system vendor. Contractor shall contact the owner's vendor and schedule the work so as to complete system installation and testing prior to occupancy of the facility.
 - E. Terminate each conduit stub-up or termination with nylon insulated bushings.

SECTION C16597
TELEPHONE SERVICE

PART 1 - GENERAL