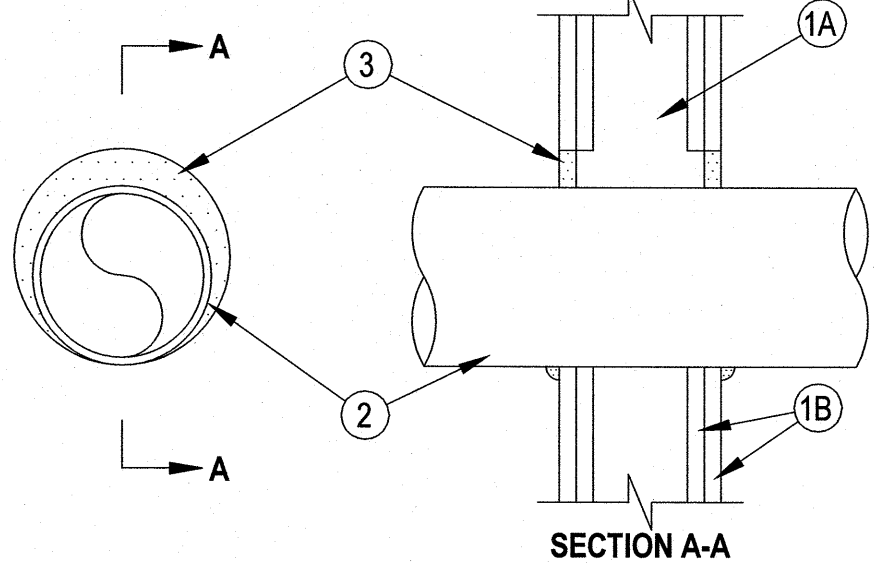


System No. W L 1054

October 14, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULCS115
F Ratings —1 and 2 Hr (See Items 1 and 3)	F Ratings — 1 and 2 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Ratings —1 and 2 Hr (See Items 1 and 3)
L Rating at 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	FTH Rating — 0 Hr L Rating at Ambient — Less Than 1 CFM/sq ft
	L Rating at 400 F — Less Than 1 CFM/sq ft



1. Wall Assembly — The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2 1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.

B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32 1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14 1/2 in. (368 mm) for wood stud walls.

The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly.

2. Through Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2 1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
- Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) diam steel conduit.
- Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
- Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.

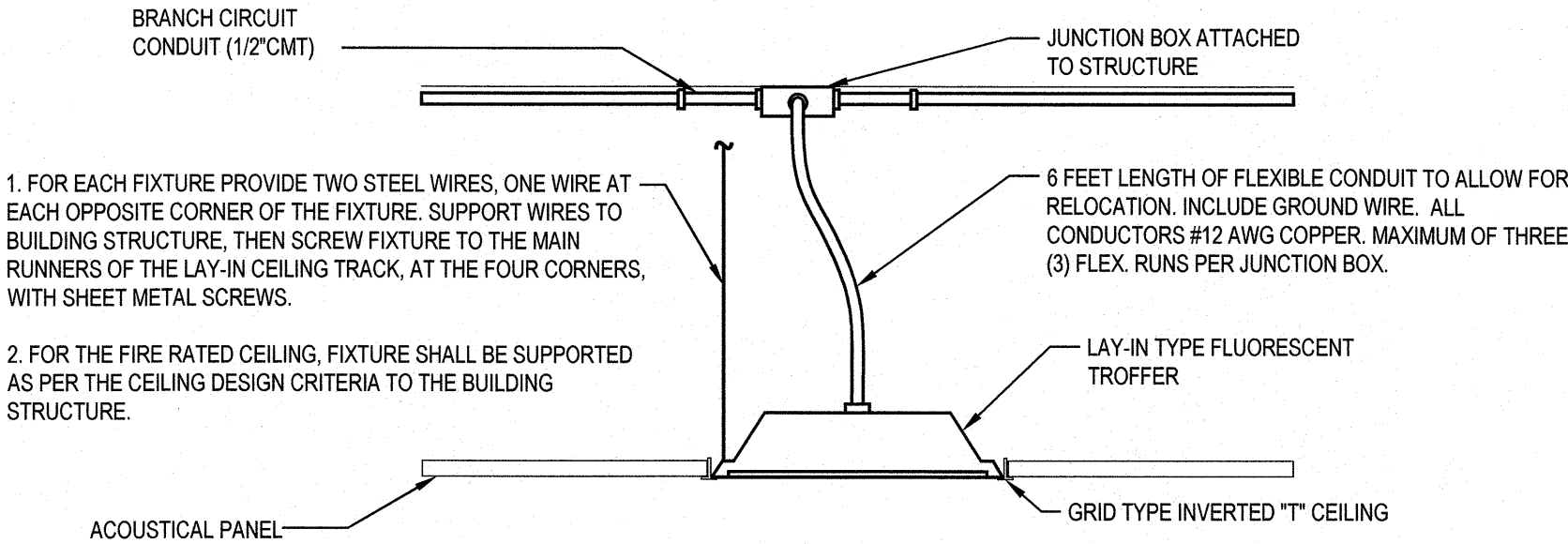
3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS One Sealant or FS ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

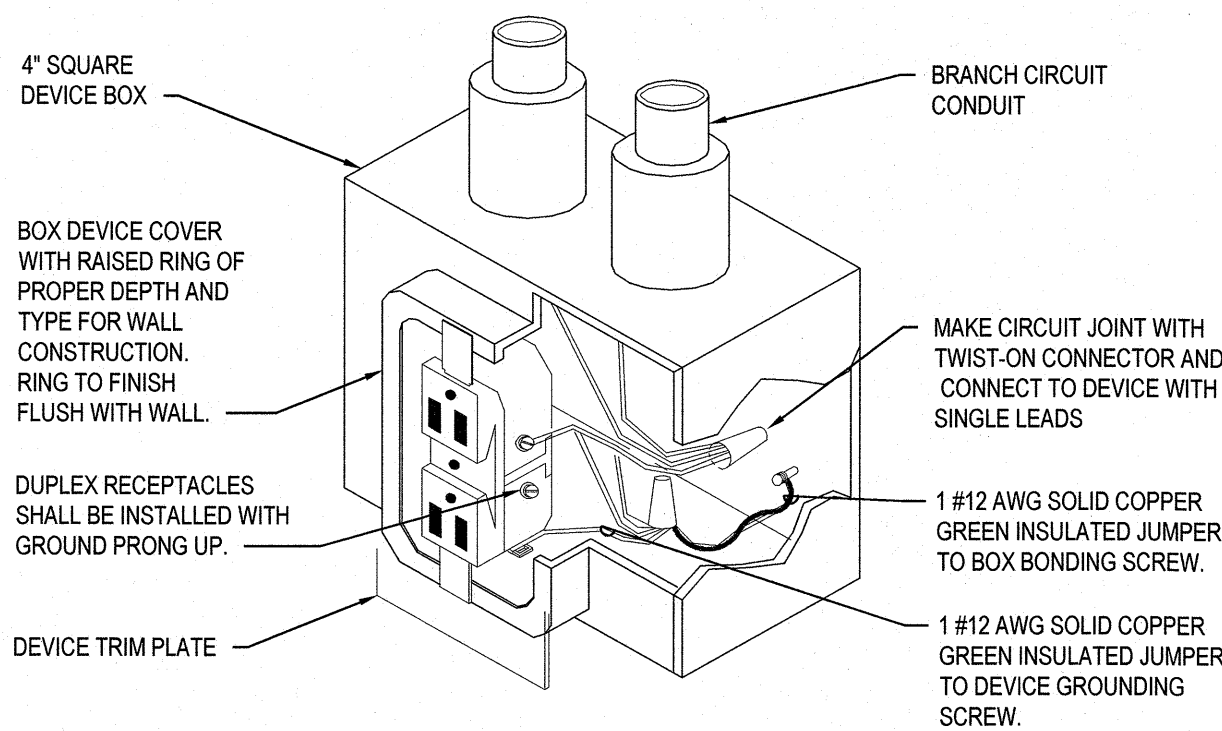
1 - 1 AND 2 HOUR FIREWALL PENETRATION DETAIL

NOT TO SCALE



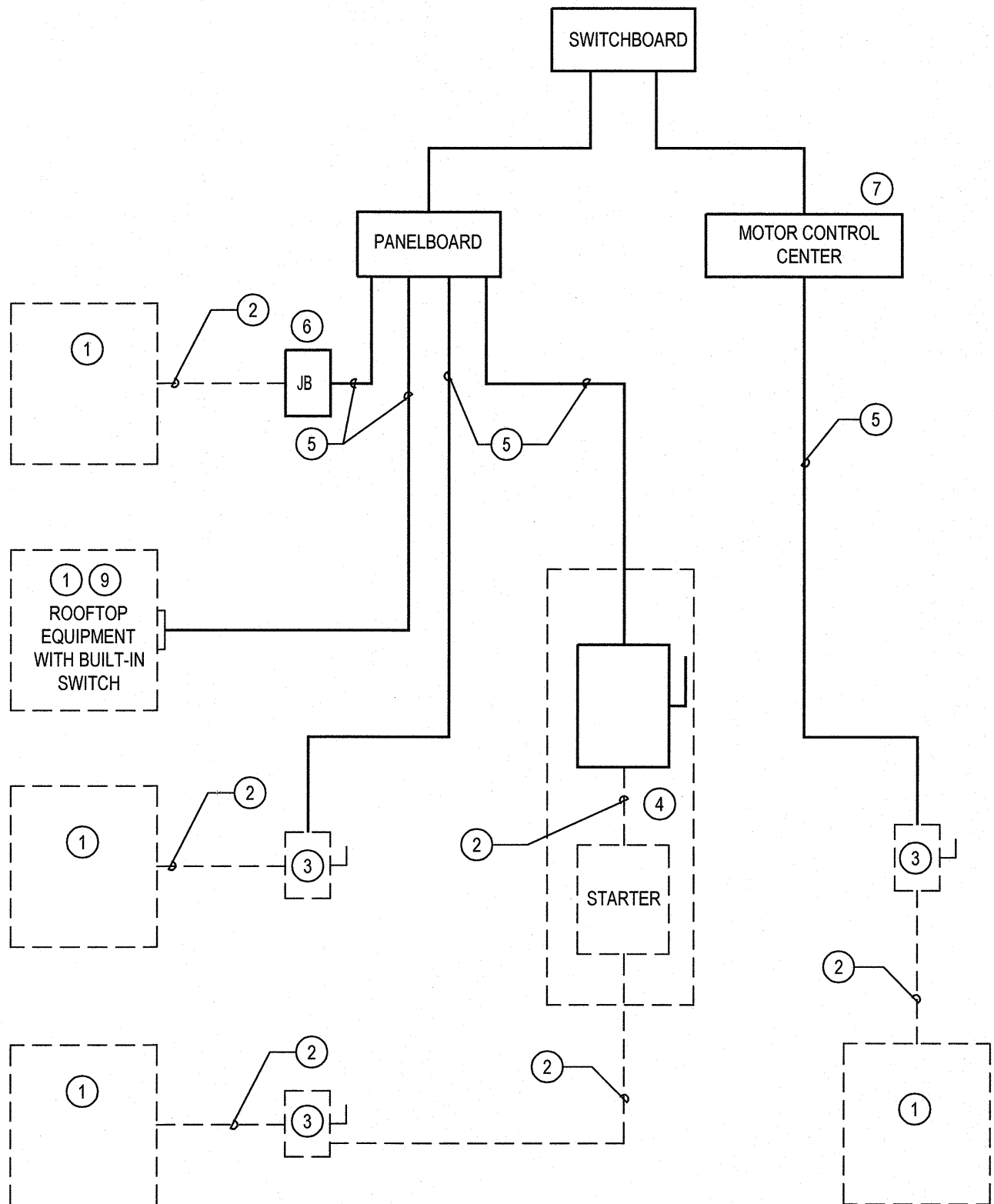
2 - LIGHTING FIXTURE MOUNTING DETAIL

NOT TO SCALE



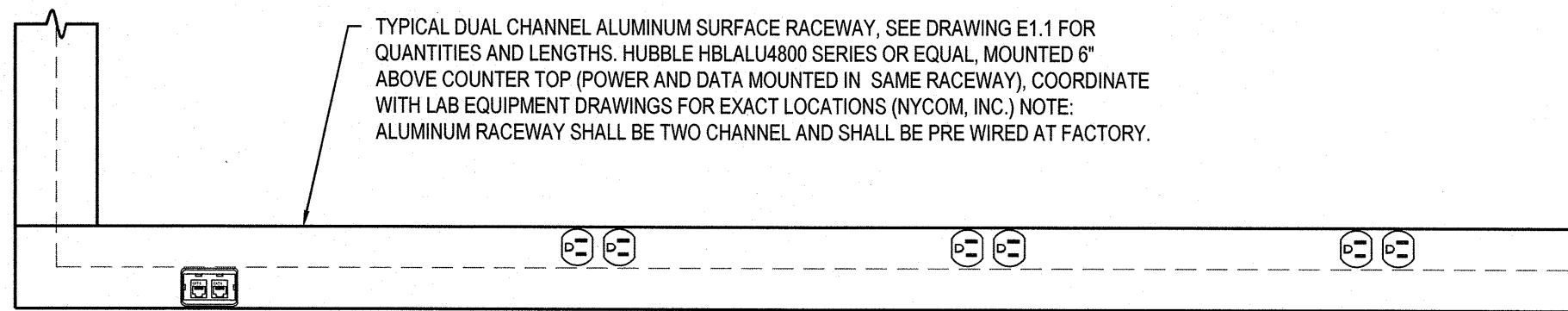
4 - RECEPTACLE GROUNDING DETAIL

NOT TO SCALE



7 - EQUIPMENT CONNECTION DETAIL

NOT TO SCALE



3 - SURFACE MOUNTED RACEWAY DETAIL

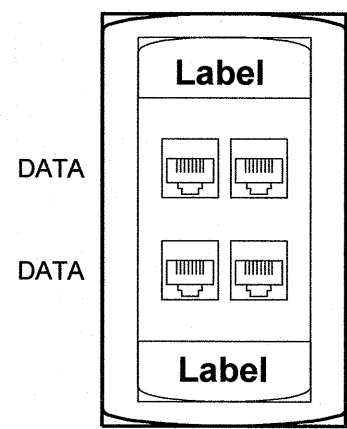
NOT TO SCALE

LEGEND

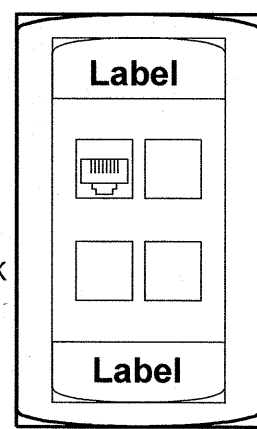
V = VOICE RJ45 JACK (WHITE)
D = DATA RJ45 JACK (BLUE)
C = UNCW CATV COUPLER KIT
B = BLANK (WHITE)

NOTE:

- ALL OUTLET BOXES FOR STATION OUTLETS SHALL BE 2-GANG WITH ADAPTORS TO SINGLE-GANG FACEPLATES.
- REFER TO DIVISION 27 SPECIFICATIONS.



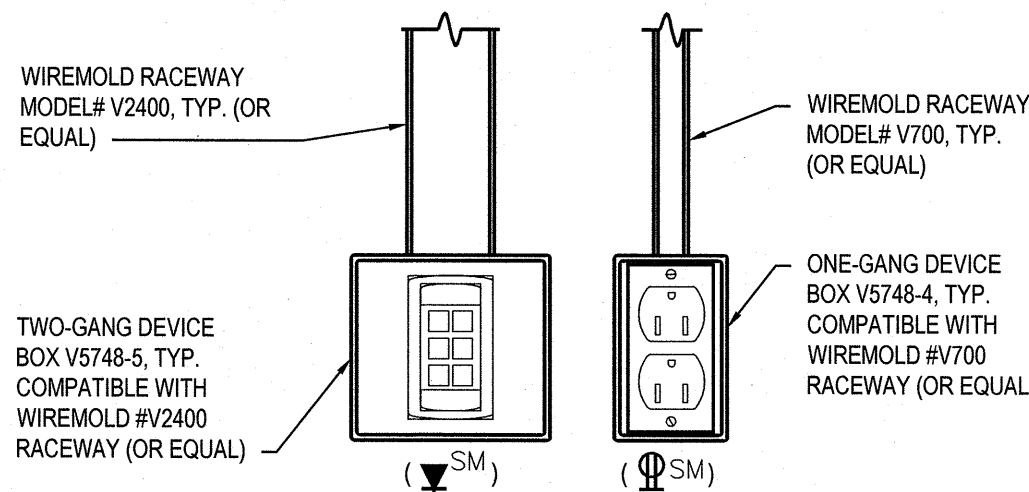
TYPICAL DATA OUTLET
(▼)



WAP OUTLET
(⚡ WAP)

5 - SURFACE MOUNTED OUTLET DETAILS

NOT TO SCALE



6 - SURFACE MOUNTED OUTLET DETAILS

NOT TO SCALE

Electrical Notes

- EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
- CONDUIT AND WIRING BY HVAC, PLUMBING CONTRACTOR OR OTHER TRADES.
- IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
- A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
- FEDDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES.
- JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
- PROJECTS UTILIZING AN MCC, THE STARTER CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP AND TEST EQUIPMENT.
- IF THE ROOF TOP FAN IS NOT PROVIDED WITH BUILT IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.
- IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIMARY CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND OTHER TRADES.

RECORD DRAWING

These Record Documents have been prepared based on information provided by others. The Engineer has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.

Dated: 2017-10-13

By: *[Signature]*

Job No.:	15250
Drawn:	HGH
Designed:	HGH
Checked:	WAC

Drawing No:

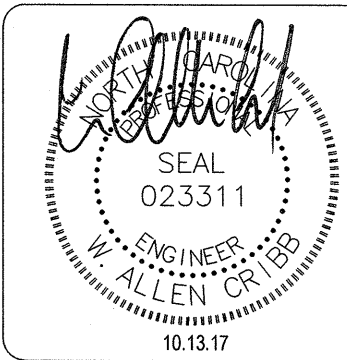
E0.2

Revision:

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601 S. COLLEGE ROAD, WILMINGTON, NORTH CAROLINA 28403
STATE ID#: 17-16875-01A

ELECTRICAL
DETAILS



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