

Alamance Consulting Engineers

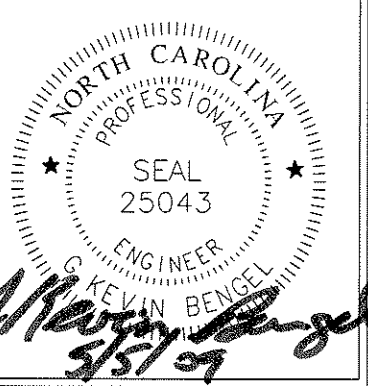
961-F Burlington Ave.
Gibsonville, N.C. 27249
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BRADLEY & BALL ARCHITECTS

5921-H WEST FRIENDLY AVE
GREENSBORO, N.C. 27410

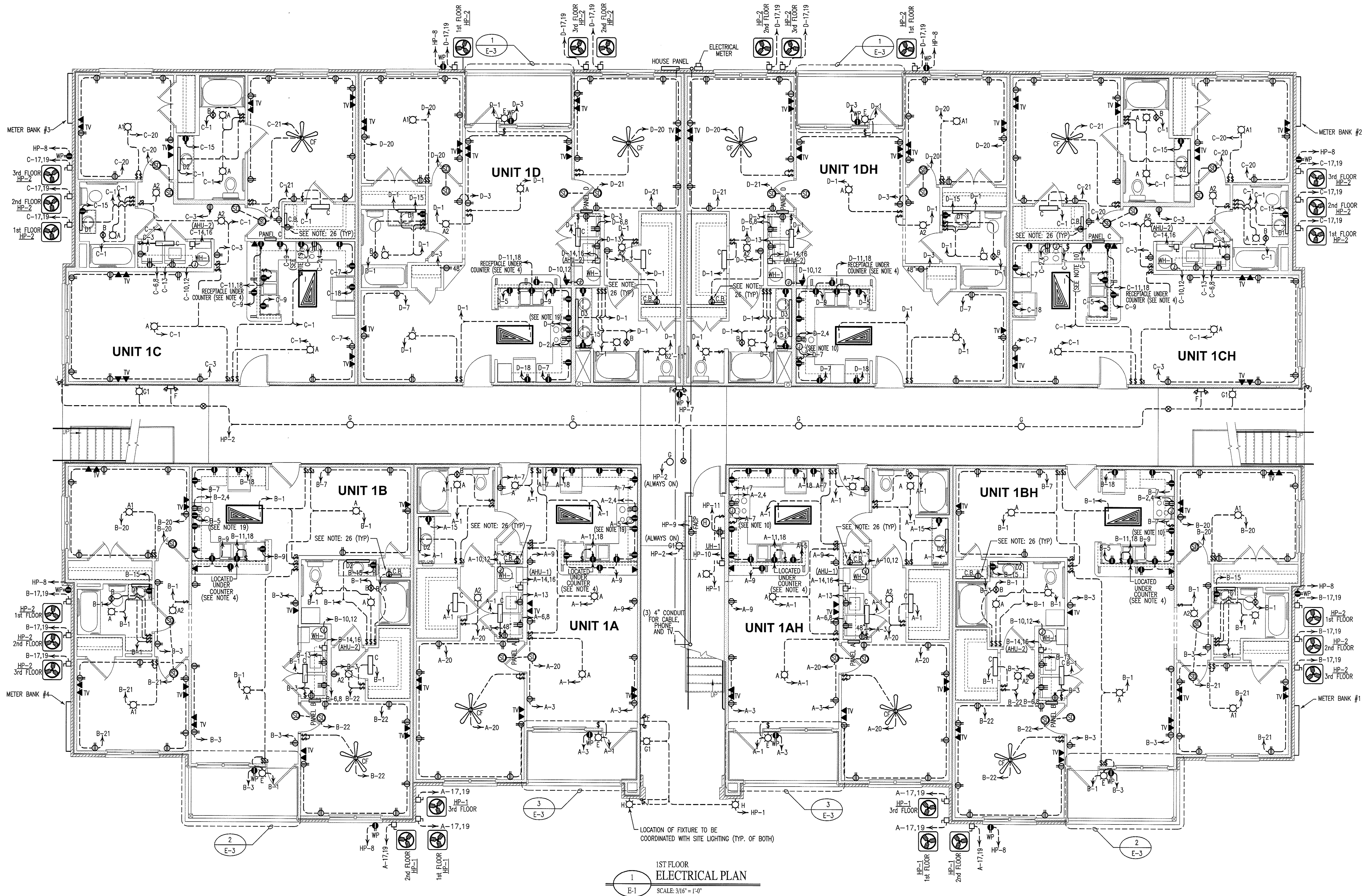
BLUE RIDGE PROJECT NUMBER 071-044A-NC
**LEGACY AT CAROLINA FOREST
"A" BUILDING-1/2/3 BEDROOM APT.**
JACKSONVILLE TOWNSHIP
JACKSONVILLE, NC

DRAWING NAME
**1ST FLOOR
ELECTRICAL PLAN**

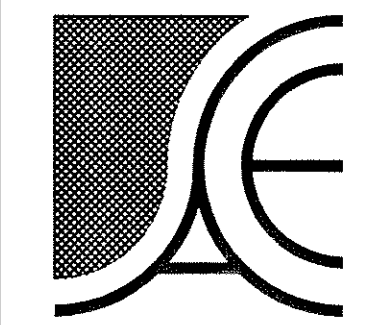


DRAWN
CCM
CHECKED
DATE
3/5/09
SCALE
AS NOTED
JOB NO.
9006
SHEET

E-1



1
E-1
1ST FLOOR
ELECTRICAL PLAN
SCALE: 3/16" = 1'-0"



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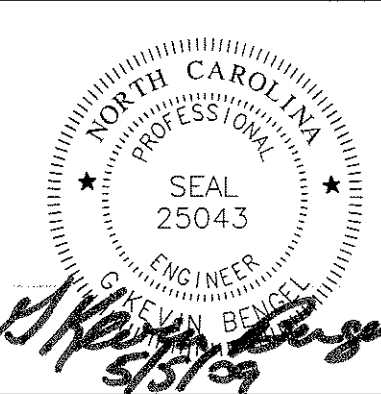
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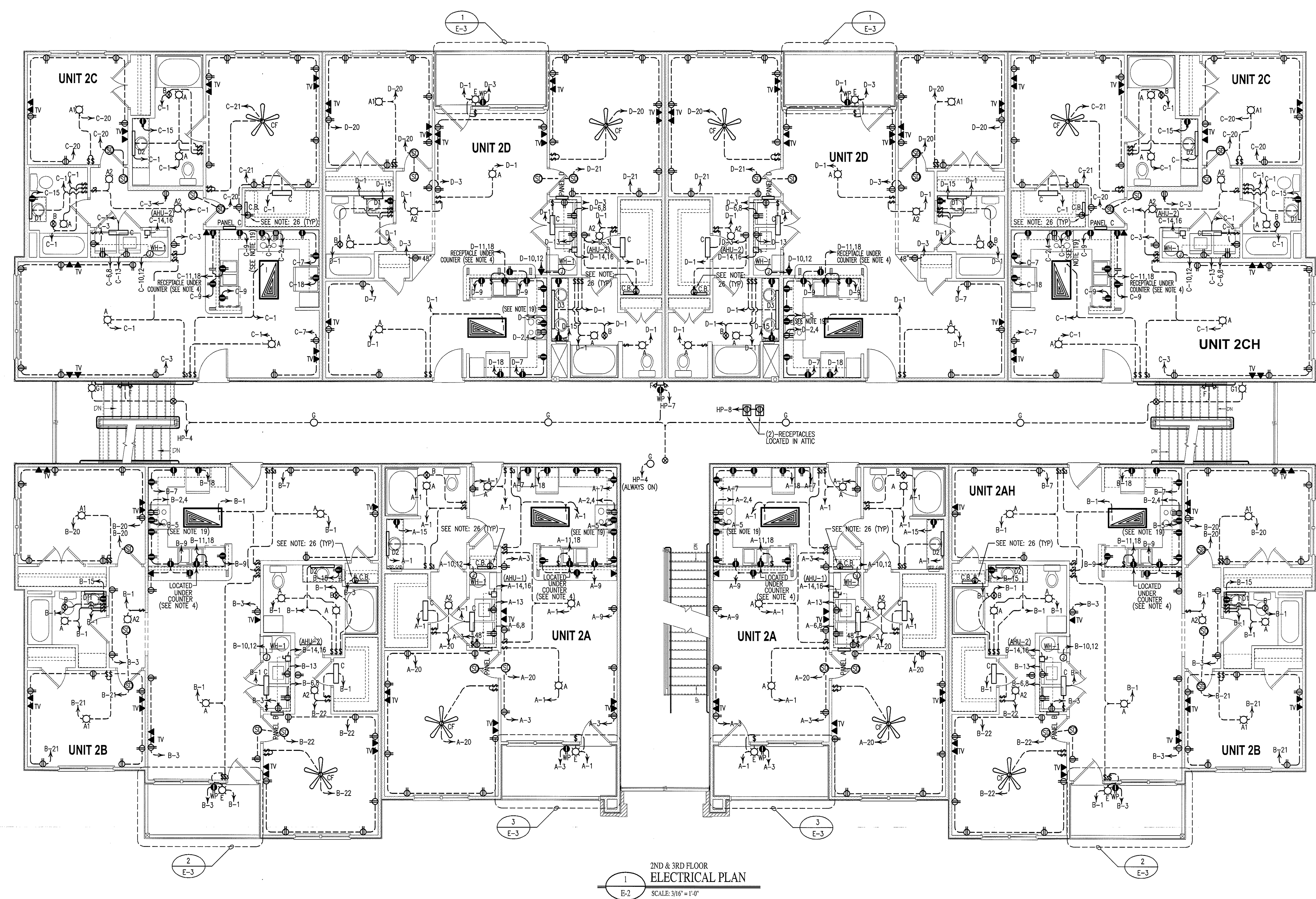
BLUE RIDGE PROJECT NUMBER 071-04A-NC
LEGACY AT CAROLINA FOREST "A" BUILDING-1/2/3 BEDROOM APT.
JACKSONVILLE TOWNSHIP JACKSONVILLE, NC

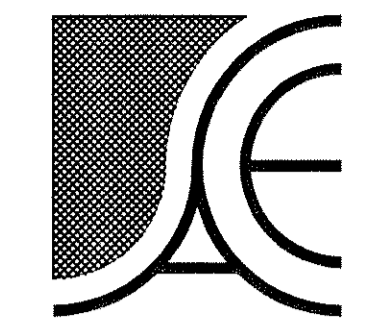
DRAWING NAME
2ND & 3RD FLOOR ELECTRICAL PLAN



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DATE
5/5/09
SCALE
AS NOTED
JOB NO.
9006
SHEET

E-2





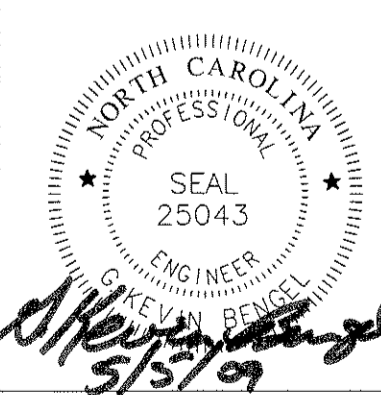
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BRADLEY & BALL ARCHITECTS
5921-H WEST FRIENDLY AVE
GREENSBORO, N.C. 27410

BLUE RIDGE PROJECT NUMBER 071-044-NC
LEGACY AT CAROLINA FOREST "A" BUILDING-1/2/3 BEDROOM APT.
JACKSONVILLE TOWNSHIP, JACKSONVILLE, NC

DRAWING NAME
ELECTRICAL DETAILS

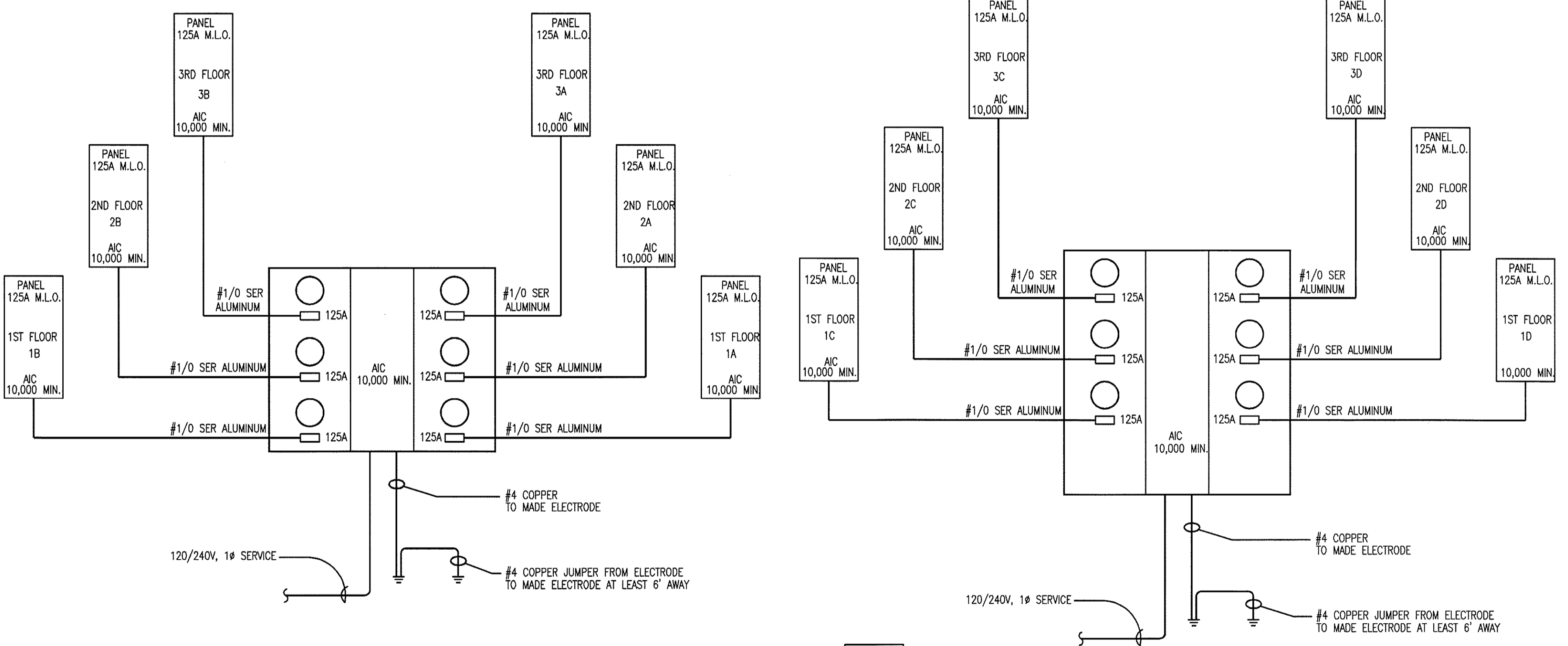
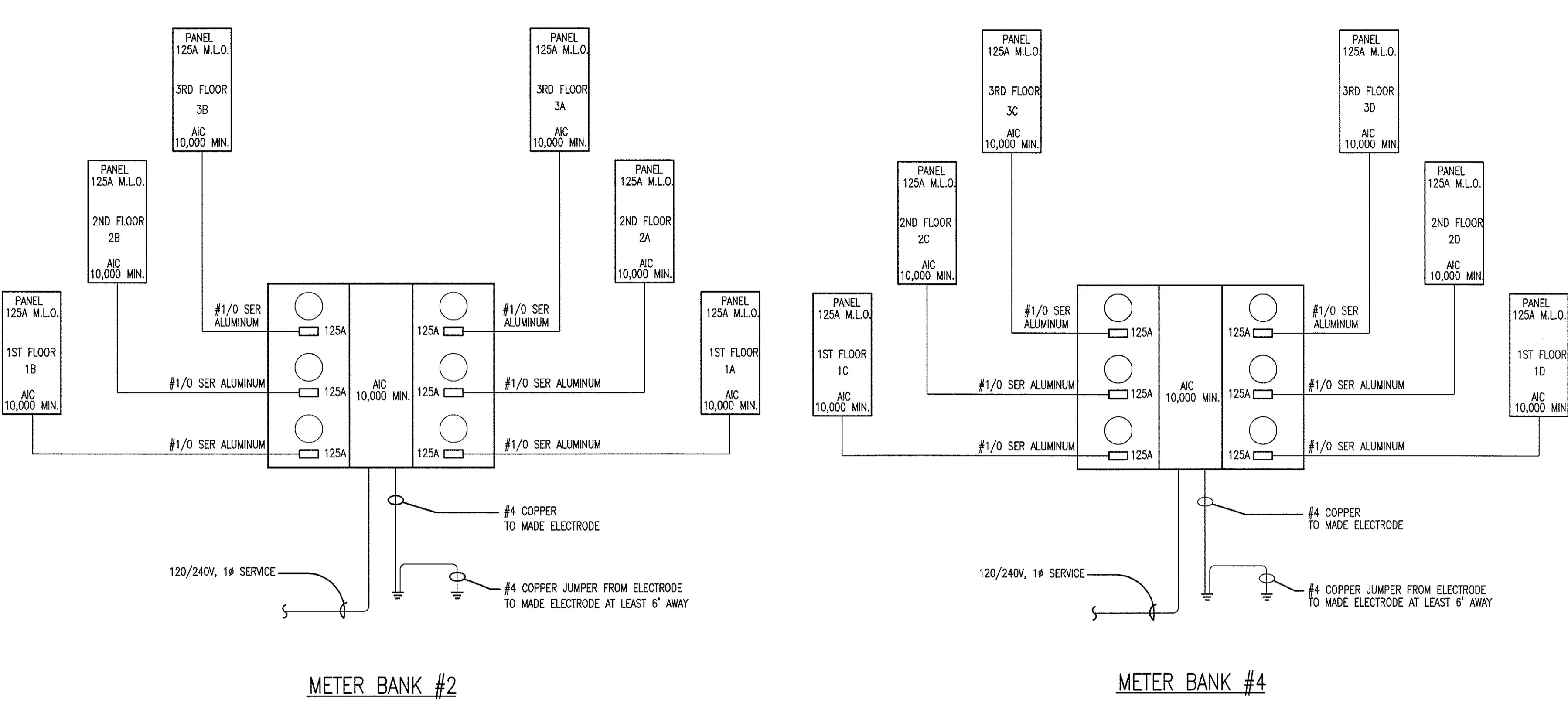


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DATE
5/5/09
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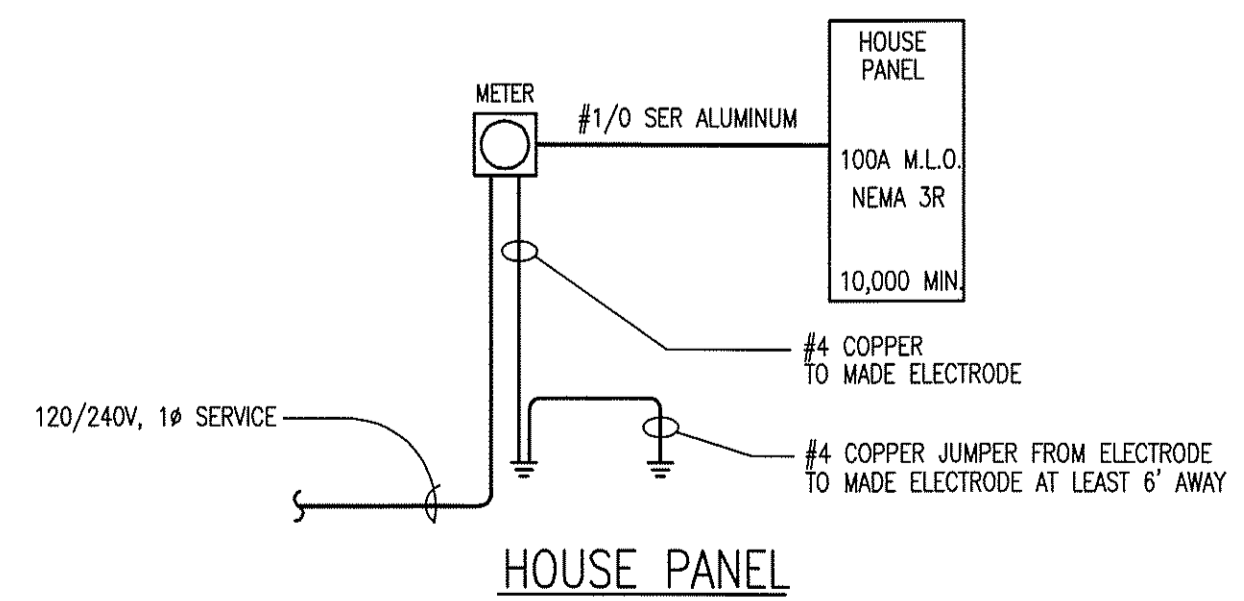
E-4

Electrical Fixture List							
Alternates must be approved by the Project Manager NOTE: Sylvania mini twist fluorescent bulbs must be installed where specified - incandescent bulbs will not be accepted							
Fixture	Description	Manufacturer	Part Number	Location	Maximum Fixture Rating	Visual Sample	Sylvania Fluorescent Bulb Cross Reference
A	Interior ceiling mounted incandescent dome light, 50W	Progress Lighting	P3816-09	Sunroom, Dining & Living Room (Boxed for future CF)	75		CF19EL - (Item # 29410)
A1	Interior ceiling mounted incandescent dome light, 50W	Progress Lighting	P4961-30	2nd & 3rd BR (Boxed for future CF)	60		CF19EL - (Item # 29376)
A2	Interior ceiling mounted incandescent dome light, 50W	Progress Lighting	P3408-09	Hall	60		CF19EL - (Item # 29376)
B	Bathroom exhaust fan						
C	Fluorescent 1-tube light	Progress Lighting	P7007-30	Laundry and Walk-in closets			
D1	4 Bulb 24" Vanity Light	Progress Lighting	P3115-15	Bath (as specified)			
D2	5 Bulb 30" Vanity Light	Progress Lighting	P3116-15	Bath (as specified)			
D3	8 Bulb 48" Vanity Light	Progress Lighting	P3118-15	Bath (as specified)			
E	Exterior Bracket Light, Incandescent, 1-Lamp, 100W	Progress Lighting	P5813-31	Patio	60		CF19EL - (Item # 29376)
F	Emergency Light with Battery Back-up	Juno Lighting	N2WH	Breezeways			
G	Fluorescent Exterior Light	Progress Lighting	P7396-60	Breezeways	13		
G1	Wall Mounted Incandescent Bracket Light	Progress Lighting	P5698-31		7		
H	Wall Mounted Carriage Fixture	Progress Lighting	P5623-71	Front Entry Substitute - Kichler 9043 BK with CF40EL bulb	36 (4 x 9)		CF9EL Candelabra (Item # 29584)
I	2'x4' Fluorescent, 4-tube, w/parabolic lens, T-8 lamp	Lithonia	10642-120-GEB10RS	Kitchen			
J	Remote mounted exterior emergency light, wire to closet exit sign or emergency light with battery back-up	Juno Lighting	NRWP1GW6V5	Egress			
K	Ceiling fan box w/ blank face plate						
L	Keyless lampholder with pull chain			Attic	100		CF29EL - (Item 29411)
CF	Ceiling fan w/ light kit	Ellington	CU52WW5 - Fan LK11WW-Light Kit (White)	Master Bedroom	13		CF12EL Minitwist 2700K (Item # 29409)
M	Exit sign w/ battery back-up	Progress Lighting	PE001-30	Breezeways			

MARK	MANUFACTURER	MODEL	TYPE	CFM	SP	POWER	SONES	WATTS	CONTROL
EF-1	GREENHECK	SP-AS0	BATHROOM EXHAUST	50	0.1" W.G.	120/1	0.7	18	SWITCH

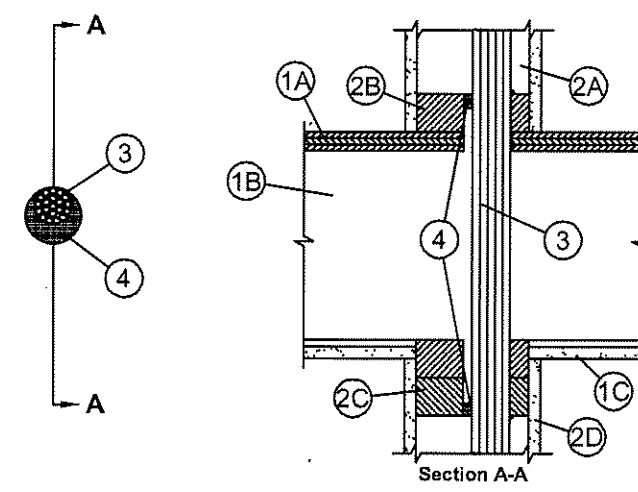


BREAKER SIZE	WIRE SIZE (ALUM.)
125A	1/0 SER ALUMINUM
100A	1/0 SER ALUMINUM



1
E-4
ELECTRICAL RISER DIAGRAMS
SCALE: N.T.S.

SYSTEM NO. F-C-3010
 F Rating - 1 Hr
 T Rating - 1 Hr



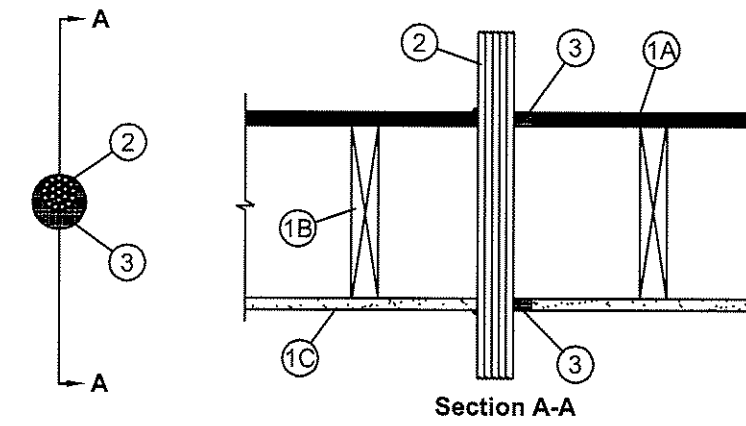
- Floor-Ceiling Assembly** - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
 - Wood Joists*** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
 - Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 3 in. (76 mm).
 - Gypsum Board*** - Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design.
- Chase Wall** - The through penetrant (Item 3) shall be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs** - Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
 - Sole Plate** - Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted together. Max diam of opening in sole plate is 3 in. (76 mm).
 - Top Plate** - The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted together. Max diam of opening in top plate is 3 in. (76 mm).
 - Gypsum Board*** - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.
- Cables** - Aggregate cross-sectional area of cable in opening to be max 45 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 0 in. (point contact) to max 1 in. (0 to 25 mm). Cables to be rigidly supported on both sides of the floor-ceiling assembly. Any combination of the following types and sizes of copper conductor cables may be used:
 - Max 25 pair No. 24 AWG telephone cable with PVC insulation and jacket.
 - Type RG 59/U coaxial cable with polyethylene (PE) insulation and PVC jacket.
 - Max 3/C with ground 2/0 AWG aluminum conductor SER cable with PVC insulation and jacket.
 - Max 3/C No. 8 AWG steel or aluminum jacketed metal clad or armored clad cable.
 - Max 3/C No. 10 AWG with ground Type NM nonmetallic sheathed (Romex) cable with PVC insulation and jacket.

SPECIFIED TECHNOLOGIES INC - Type WF300 Caulk

*Bearing the UL Classification Mark

1 FIRE PENETRATION DETAIL (FOR ALL BUT #8 NM CABLE)
 E-5 SCALE: N.T.S.

System No. F-C-3057
 F Rating - 1 Hr
 T Rating - 1 Hr



- Floor - Ceiling Assembly** - The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly.** The general construction features of the floor assembly are summarized below:
 - Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening is 3 in.
 - Wood Joists** - Nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
 - Gypsum Board*** - Thickness, type, number of layers and fasteners as required in the individual Floor-Ceiling Design. Max diam of opening is 3 in.
- Chase Wall** - (Optional, Not Shown) - The through penetrant (Item 2) may be routed through a 1 or 2 hr fire rated single, double or staggered wood stud/gypsum board chase wall. Depth of chase wall stud cavity to be min 1/2 in. greater than diameter of opening cut in sole and top plates to accommodate the through penetrant (Item 2). The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs** - Nom 2 by 4 in., 2 by 6 in. or double nom 2 by 4 in. lumber studs.
 - Sole Plate** - Nom 2 by 4 in., 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted. Max diam of opening is 3 in.
 - Top Plate** - The double top plate shall consist of two nom 2 by 4 in., two nom 2 by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of opening is 3 in.
 - Gypsum Board*** - Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.
- Cables** - Aggregate cross-sectional area of cables within opening to be max 54 percent of the cross-sectional area of the opening. Annular space to be min 0 in. (point contact) to max 1-1/4 in. Penetrants to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of cables may be used:
 - Max 200 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with PVC insulation and jacketing.
 - Max 3/C No. 3/0 AWG (or smaller) aluminum or copper conductor SER cable with PVC insulation and jacketing.
 - Max 3/C with ground No. 8 AWG (or smaller) Type NM (Romex) nonmetallic sheathed cable with PVC insulation and jacketing.
 - Max 1/C - 350 kcmil (or smaller) power cables with XLP insulation and jacketing.
 - Max 7/C No. 12 AWG (or smaller) power/control cables with PVC insulation and jacketing.
 - Max RG/U (or smaller) copper conductor coaxial cable with fluorinated ethylene insulation and jacketing materials.
 - Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar insulation and jacketing.
 - Max 4 pair No. 18 AWG (or smaller) copper conductor instrumentation cable with PVC insulation and jacketing.
 - Fiber optic cable with PVC insulation and jacketing.
- Through Penetrating Product*** - (Not Shown) As an alternate Item 3), one or more through-penetrating product to be installed within the opening. Max aggregate cross-sectional area of cables to be 52 percent of the cross-sectional area of the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1-1/4 in. Through penetrating product rigidly supported on both sides of floor or wall assembly. The following types of through-penetrating products may be used:
 - Max four copper conductors No. 2/0 AWG (or smaller) aluminum or steel **Armored Cable** or **Metal-Clad Cable**+
 - AFC CABLE SYSTEMS INC**
 - Two or more twisted copper conductors No. 6 AWG (or smaller) **Power Limited Circuit Cable**+ with or without a jacket under a metal armor.
 - AFC CABLE SYSTEMS INC**
 - Two or more twisted copper conductors No. 10 AWG (or smaller) **Power Limited Fire Alarm Cable**+ with or without a jacket under a metal armor.
 - AFC CABLE SYSTEMS INC**
 - Max two twisted copper conductors No. 12 AWG (or smaller) **Non Power Limited Fire Alarm Cable**+ with or without a jacket under a metal armor.
 - AFC CABLE SYSTEMS INC**
- Fill, Void or Cavity Material*** - **Sealant** - Min 3/4 in. thickness of fill material applied within the annulus, flush with the top surface of the floor or chase wall sole plate. Min 5/8 in. thickness of fill material applied within the annulus, flush with bottom surface of ceiling or chase wall top plate. At point contact, min 1/4 in. diam bead of fill material applied at cable bundle/subfloor or chase wall sole plate interface and at cable bundle/ceiling or chase wall top plate interface.

*Bearing the UL Classification Mark

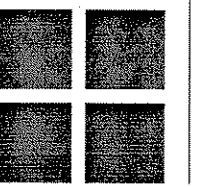
2 FIRE PENETRATION DETAIL (USE FOR #8 NM CABLE ONLY)
 E-5 SCALE: N.T.S.



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 JACKSONVILLE TOWNSHIP JACKSONVILLE, NC

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