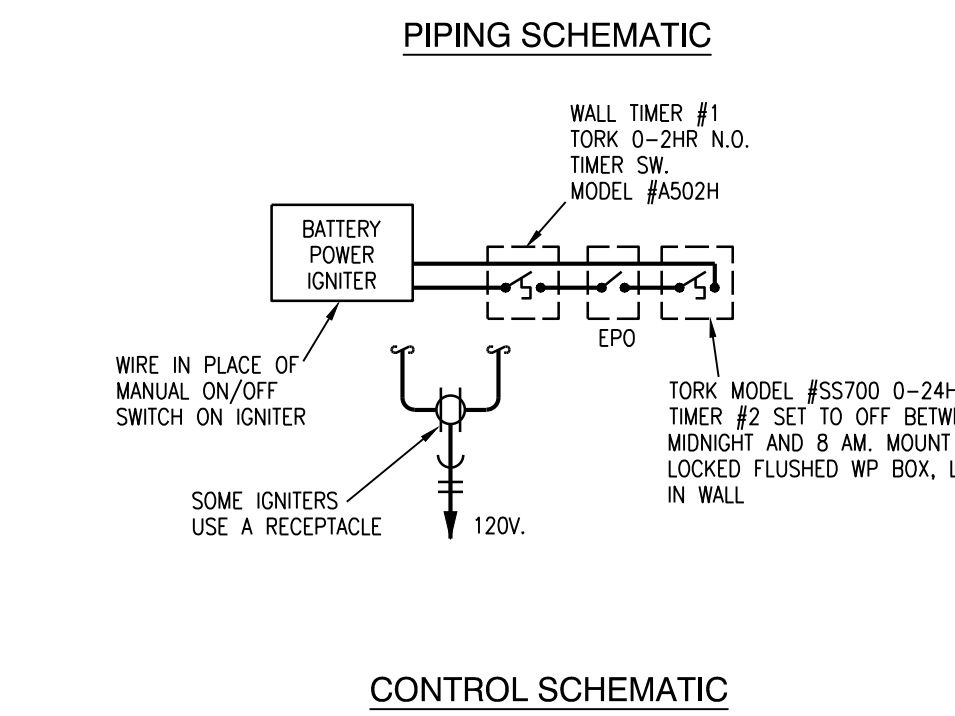
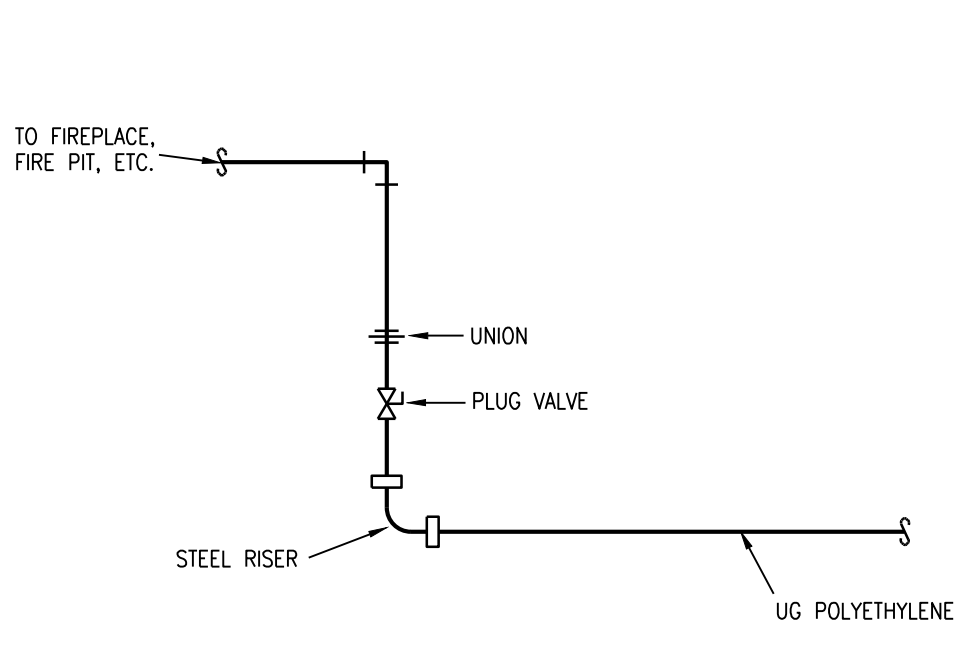
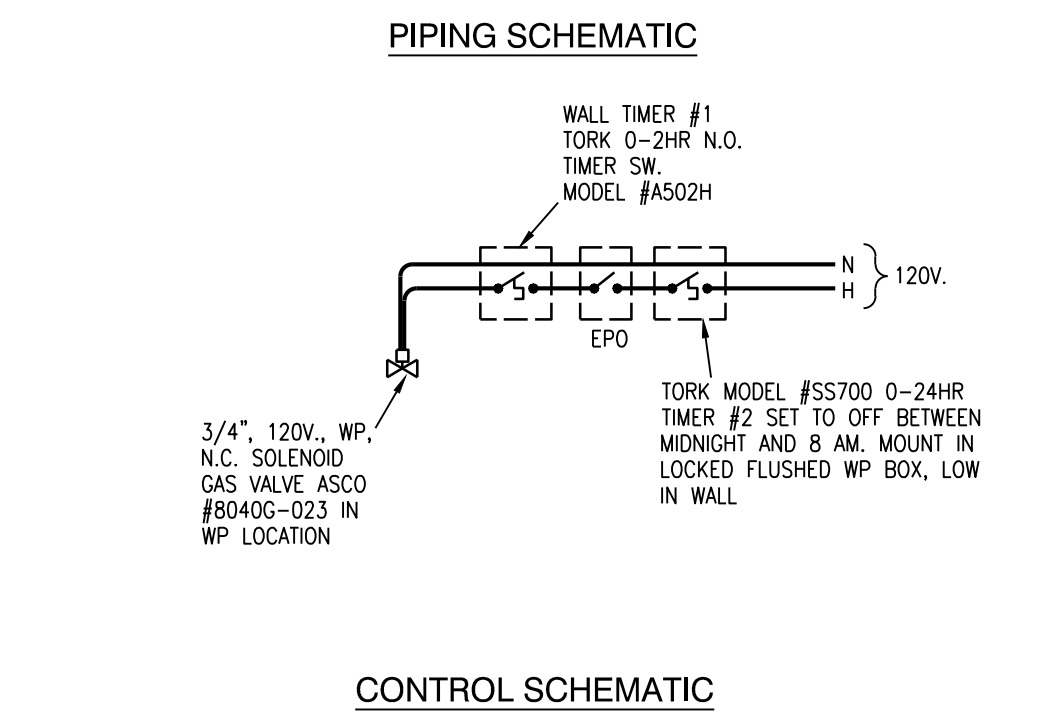
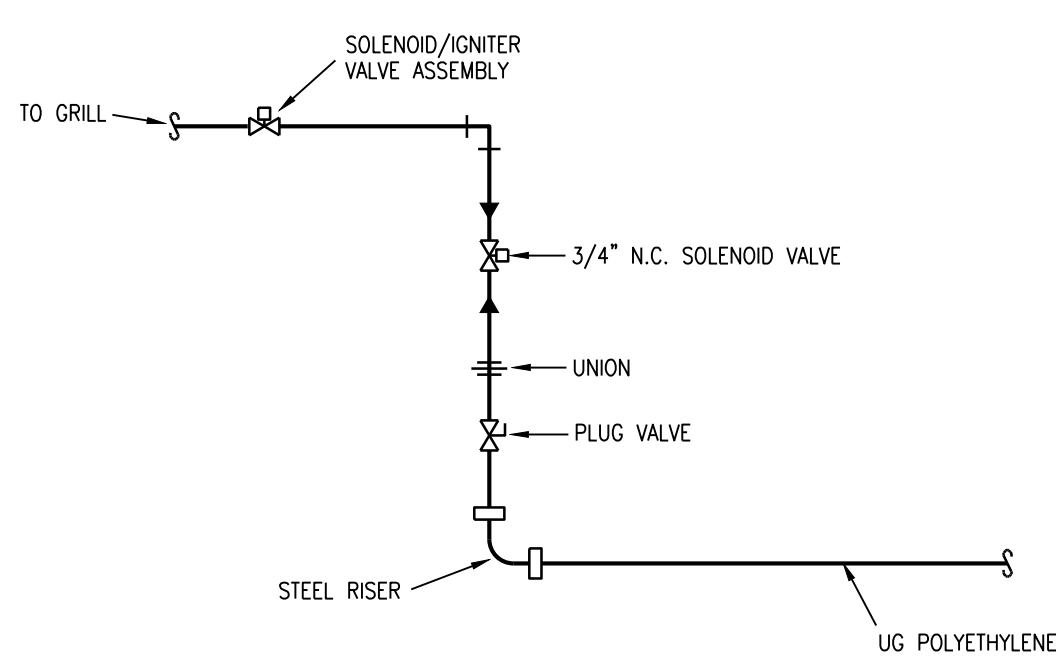


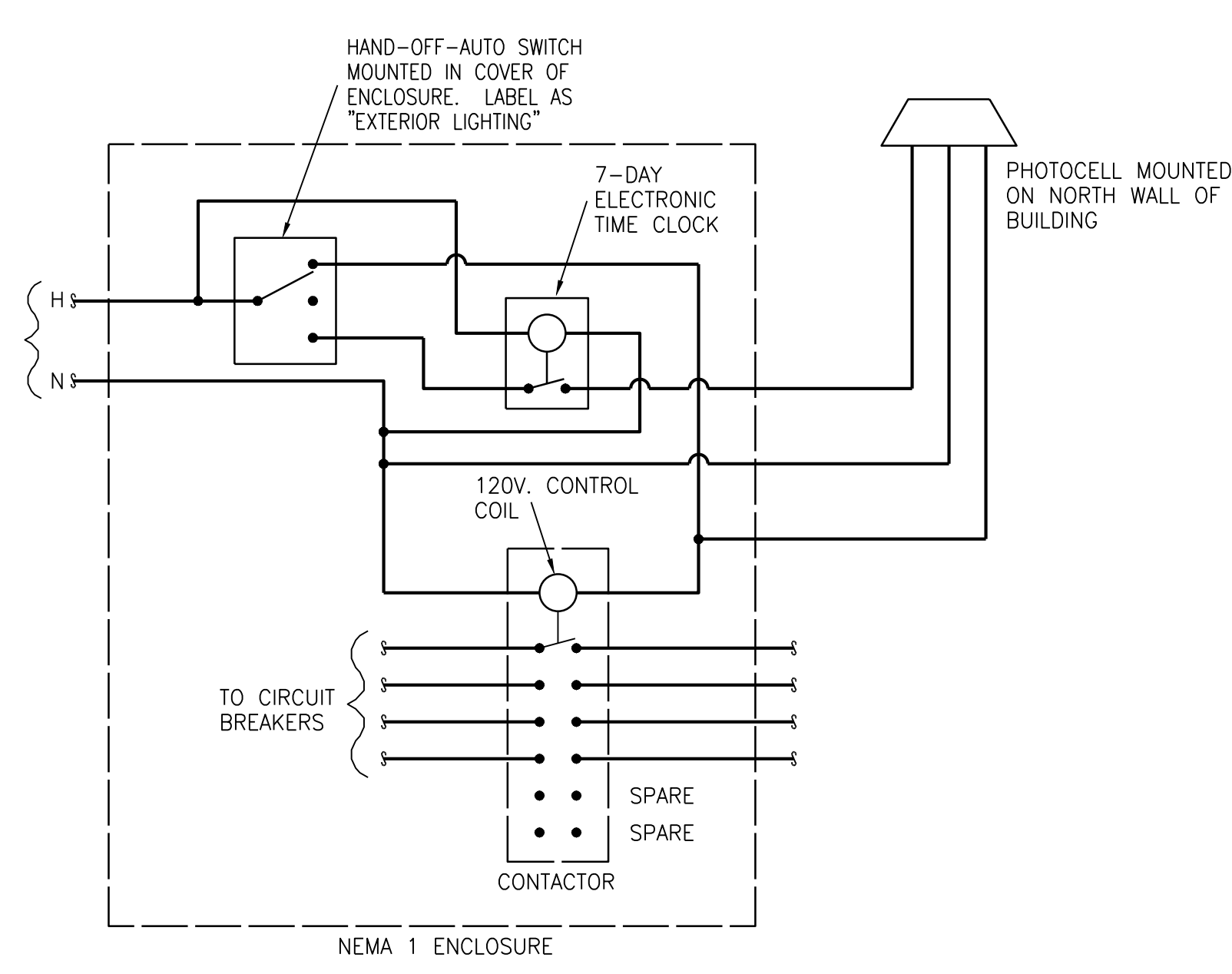
1 ELECTRICAL DISTRIBUTION RISER DIAGRAM
NO SCALE



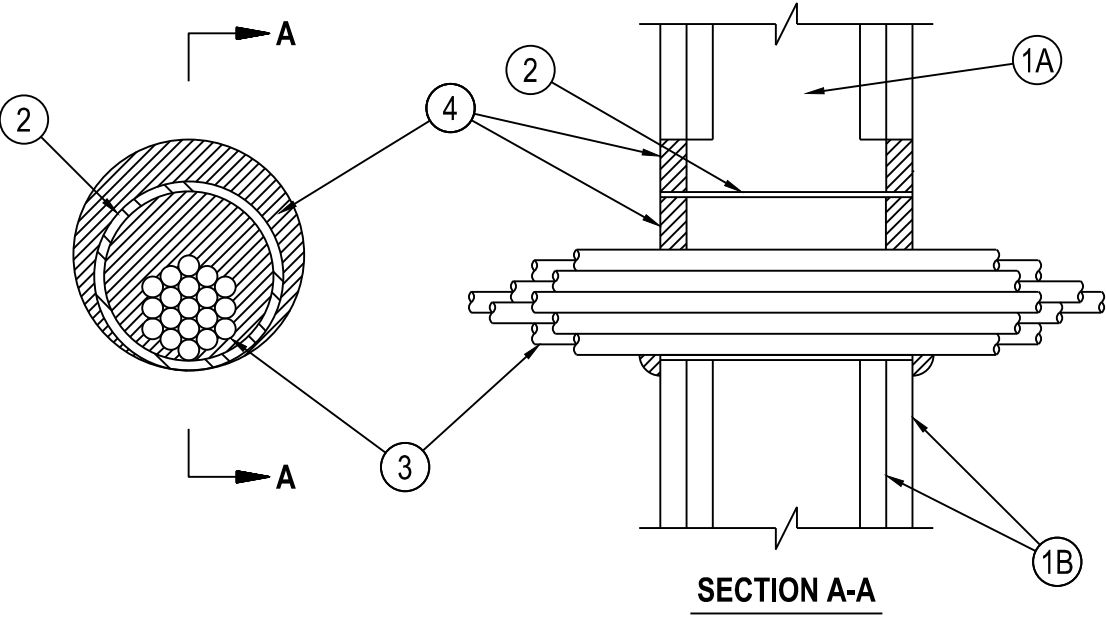
2 GAS CONTROL DETAIL
NO SCALE (FIRE PIT)



3 GAS CONTROL DETAIL
NO SCALE (GRILL)



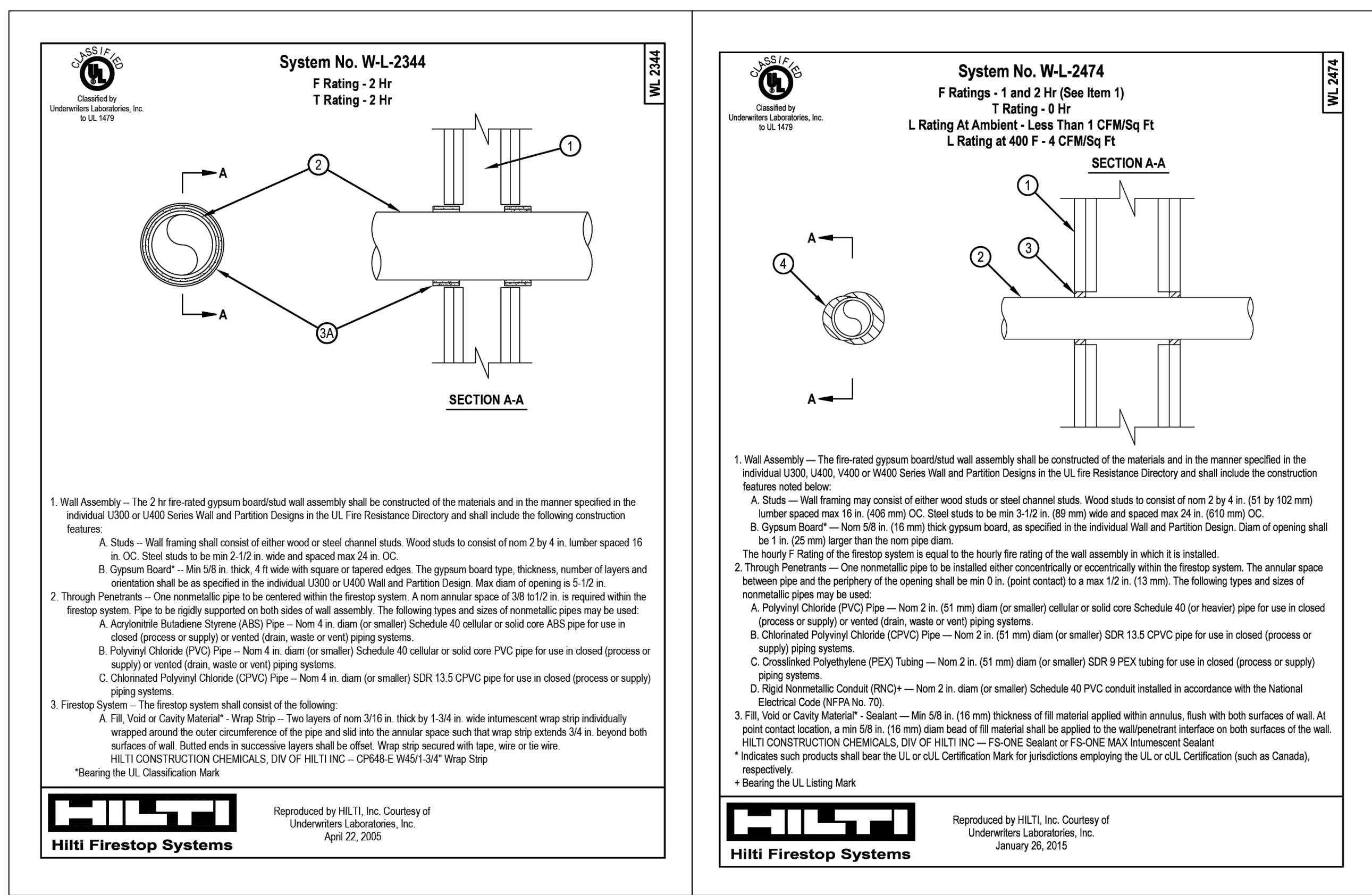
4 EXTERIOR LIGHTING
NO SCALE CONTROL PANEL SCHEMATIC



5 FIRE RATED PENETRATION DETAIL
NO SCALE SYSTEM WL-3065

NOTES AND LEGENDS:

1. Wall Assembly — The 1 or 2 fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 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.
 - B. Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board, 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, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 5-1/2 in. (138 mm) when sleeve (Item 2) is employed. Max diam of opening is 4 in. (102 mm) when sleeve (Item 2) is not employed. The F Rating of the firestop system is equal to the fire rating of the wall assembly.
2. Metallic Sleeve — (Optional) — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or Schedule 5 (or heavier) steel pipe or min 0.016 in. thick (0.41 mm, N2o. 28 ga) galv steel sleeve installed flush with wall surfaces. The annular space between steel sleeve and periphery of opening shall be min 0 in. (0 mm, point contact) to max 1 in. (25mm). When Schedule 5 steel pipe or EMT is used, sleeve may extend up to 18 in. (457 mm) beyond the wall surfaces.
3. 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. (0 mm, point contact) to max 1 in. (25 mm) Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types and sizes of copper conductor cables may be used:
 - A. Max 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.
 - B. Max 25 pair No. 24 AWG telephone cable with PVC insulation and jacket.
 - C. Type RG/U coaxial cable with polyethylene (PE) insulation and PVC jacket having a max outside diameter of 1/2 in. (13 mm).
 - D. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 5/8 in. (16 mm).
 - E. Through Penetrating Products*— Max three copper conductor No. 8 AWG . Metal-Clad Cable+.
 - F. Max 3/C (with ground)(or smaller) No. 8 AWG copper conductor cable with PVC insulation and jacketing.
 - G. Max 3/4 in. (19 mm) diam copper ground cable with or without a PVC jacket.
 - H. Fire Resisive Cables* — Max 1-1/4 in. (32 mm) diam single conductor or multi conductor type MI cable. A min 1/8 in. (3 mm) separation shall be maintained between MI cables and any other types of cable.Through Penetrating Product* — Any cables, Metal-Clad Cable+ or Armored Cable+ currently Classified under the Through Penetrating Products category. See Through Penetrating Product (XHLV) category in the Fire Resistance Directory for names of manufacturers.
4. Fill, Void or Cavity Material*— Sealant or Putty — Fill material applied within the annulus, flush with each end of the steel sleeve or wall surface. Fill material installed symmetrically on both sides of the wall. A min 5/8 in. (16 mm) thickness of sealant is required for the 1 or 2 hr F Rating . An additional 1/2 in. (13 mm) diam bead of fill material shall be applied around the perimeter of sleeve on both sides of the wall when sleeve extends beyond surface of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CP606, FS-One Sealants or CP618 Putty
*Bearing the UL Classification Mark
+Bearing the UL Listing Mark



NOTES AND LEGENDS:

1. 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 U500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
 - A. 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 shall be 3 in.
 - B. Wood Joist* — 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.
 - C. Gypsum Board* — Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design.
- 1A. Chose Wall — (Optional, Not Shown) — The through penetrants (Item 2) may be routed through a 1 hr fire rated single, double or staggered wood stud/gypsum board chose wall. Depth of chose 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 chose 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:
 - A. Studs — Nom 2 by 4 in., 2 by 6 in. or double nom 2 by 4 in. lumber studs.
 - B. 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.
 - C. 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.
 - D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.
2. Cables — Aggregate cross-sectional area of cable in opening to be max 50 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. 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:
 - A. Max 150 pair No. 24 AWG telephone cable with PVC insulation and jacket.
 - B. Max 2/C No. 10 with ground Type NM nonmetallic sheathed (Romex) cable with PVC insulation and jacket.
 - C. Max 3/C with ground 2/0 AWG aluminum SER cable with PVC insulation and jacket.
 - D. Max 3/C No. 10 AWG copper conductor steel clad cable.
 - E. Max 24 fiber optic cable.
 - F. RG 59U coaxial cable.
 - G. CAT 5 data cable.
3. Fill, Void or Cavity Materials*—Sealant — Min 3/4 in. thickness of sealant applied within the annulus flush with the top surface of the floor or sole plate and min 5/8 in. thickness of sealant applied within the annulus flush with the bottom surface of gypsum board or lower top plate. A min 1/2 in. diameter bead of sealant applied at the cable bundle/subflooring or sole plate interface and the cable bundle/gypsum board or top plate interface at point contact locations. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 Flexible Firestop Sealant
*Bearing the UL Classification Mark

6 FIRE RATED PENETRATION DETAIL
NO SCALE SYSTEM FC-3074

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| MD PROJECT # | 24097 | CD |
| DRAWN BY | CRD | RB |
| CHECKED BY | PRELIMINARY | 5/31/2024 |
| PERMIT SET | REVISION SCHEDULE | DATE |
| # | DATE | DESCRIPTION |
| 1 | 04/16/25 | COORDINATION |