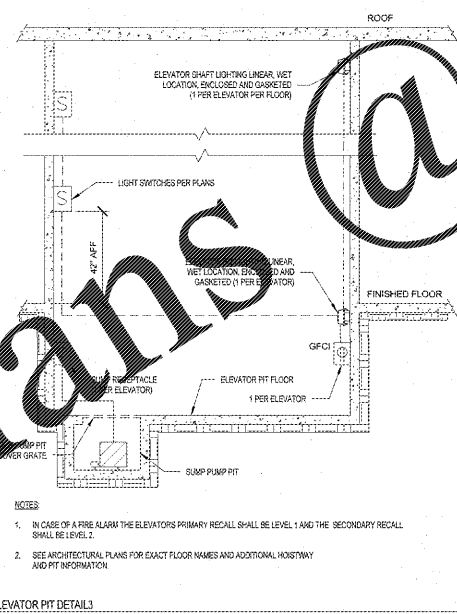
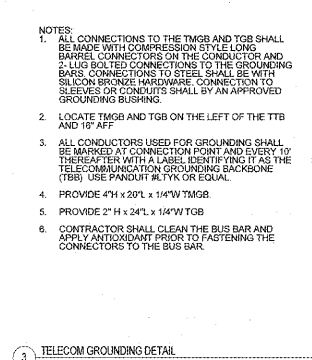


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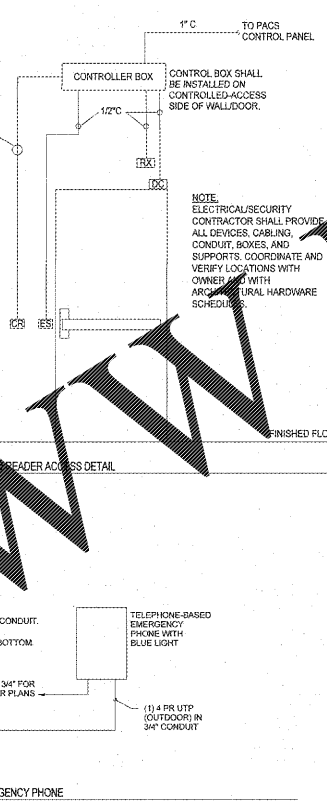
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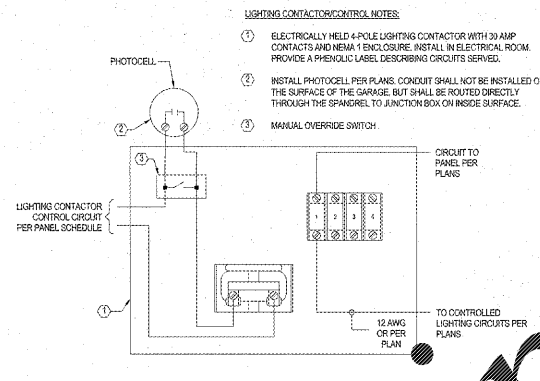
8 ELEVATOR PIT DETAILS N.T.S.



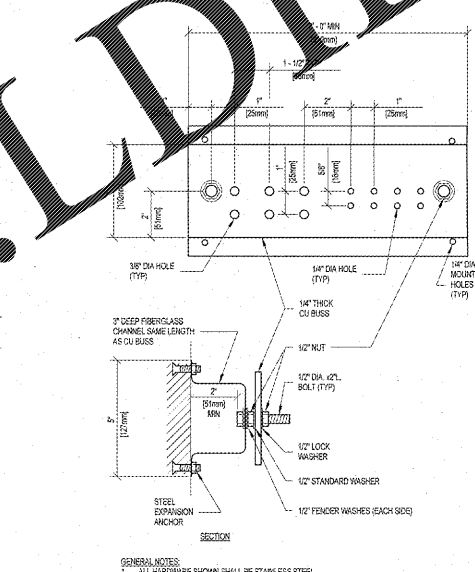
3 TELECOM GROUNDING DETAIL N.T.S.



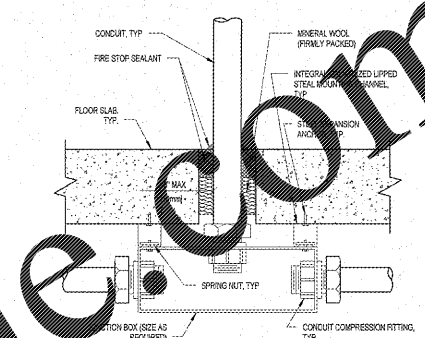
6 EMERGENCY PHONE N.T.S.



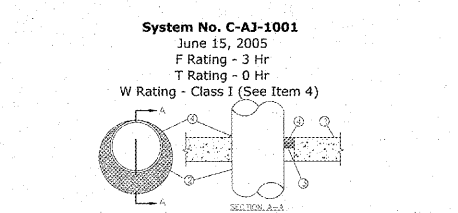
5 LIGHTING CONTACTOR DETAIL N.T.S.



4 PARKING GARAGE ELECTRICAL ROOM GROUNDING BAR DETAIL N.T.S.



2 FLOOR SLAB PENETRATION DETAIL N.T.S.



- 1. Floor or Wall Assembly** - 30# 4-1/2 in. (114 mm) dual lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be construction of any UL Classified **Concrete Blocks***. Min. dim. or circular through opening is 32-1/2 in. (826 mm).
 See **Concrete Blocks** (CA2) category in the Fire Resistance Directory for names of manufacturers.
- 1A. Steel Sleeve** (Optional, not shown) - Min. 1/2 in. (305 mm) diam. (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max. 2 in. (51 mm) from top surface of floor or from both surfaces of wall.
- 2. Through Penetrant** - One metallic pipe, conduit or tubing installed either concentricity or eccentricity within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min. of 0 in. (0 mm) (point contact) to max. 1-3/8 in. (45 mm). 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:
A. Steel Pipe - Min. 3/4 in. (19.0 mm) diam. (or smaller) Schedule 40 (or heavier) steel pipe.
A1. Iron Pipe - Min. 3/4 in. (19.0 mm) diam. (or smaller) cast or ductile iron pipe.
B. Conduit - Min. 6 in. (152 mm) diam. (or smaller) rigid steel conduit.
C. Conduit - Min. 4 in. (102 mm) diam. (or smaller) steel electrical metallic tubing.
- 3. Packing Material** - Polyethylene backup rod or min. 1 in. (25 mm) thickness of tightly-packed ceramic (alumina silicate) fiber blanket, mineral wool batt or glass fiber insulation material used as a permanent form. Packing installed to be recessed from top surface of floor or from both surfaces of solid concrete or concrete block wall as required to accommodate the required thickness of chafe (B) material (Item 4). As an alternate when more open space is 1/2 in. (25.4 mm) diam. and when max. annular space is 1 in. (25 mm), a min. 1 in. (25 mm) thickness of tightly-packed ceramic fiber blanket or mineral wool batt packing material may be recessed min. 1/2 in. (12.7 mm) from bottom surface of floor or from either side of solid concrete wall.
- 4. Fill/Void or Cavity Materials* - Caulk or Sealant** - Applied to fill the annular space to the min. thickness shown in the following table:

Max. Pipe Diam. (mm)	Max. Annular Space (mm)	Packing Mat'l. Type (a)	Min. Caulk. Thick. (mm)
10 (254)	1 (25)	BH, GF, GP or MW	1/2 (12.5) (b)
10 (254)	1 (25)	GF or MW	1/2 (12.5) (c)
30 (762)	2-1/2 (63.5)	BH, GF, GP or MW	1 (25) (b)

(a) BH = Polyethylene backup rod
 GF = Glass fiber insulation
 GP = Mineral wool batt
 MW = Mineral wool batt
 (b) Caulk installed flush with top surface of floor or both surfaces of wall
 (c) Caulk installed flush with bottom surface of floor or one surface of wall (non-concrete block) wall.
 *Refer to the UL Classification Marking.
 *Note: W Rating applies only when PB-3000 WT sealant is used.

1 CONDUIT PENETRATION THROUGH CONCRETE BLOCK ASSEMBLY (UL FC-AJ-1001) N.T.S.

U.S. Department of Veterans Affairs MEMPHIS VAMC 1030 JEFFERSON AVE, MEMPHIS, TN 38104				ARCHITECT/ENGINEERS: PROJECT LEAD Architect, Structural Engineer, Civil Engineer GUIDON DESIGN 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN 46204 317.800.6388 WWW.GUIDONDESIGN.COM SUSTAINABLE ARCHITECTURE + ENGINEERING		MEP Engineer APOGEE CONSULTING GROUP 1151 Kildaire Farm Rd. Suite 120 Cary, NC 27511 Tele: 919-858-7420		Functional Design CARL WALKER INC. 3211 Internet Blvd., Suite 220 Frisco, TX 75034 Tele: 469-777-5143		Drawing Title ELECTRICAL DETAILS		Project Title CONSTRUCT PARKING GARAGE ON WEST LOT		Project Number 15-412		OFFICE OF FACILITIES MANAGEMENT	
Revisions: _____ Date: _____		Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER		Location MEMPHIS, TN		Drawing Number EE501		VA Project Number 614-319		U.S. Department of Veterans Affairs		Date 11/14/2016		Checked By: JKM		Drawn By: SCB	