Note:
1. Refer to the following specifications for firestopping:
   a. 27-00-12 Penetration Firestopping
   b. 27-00-17 Penetration Firestopping
   c. 22-00-09 Plugging
2. Details shown are typical, containing general information only. Always refer to the NFU system data for complete system requirements. If field conditions do not match requirements of details, approval of alternate details shall be utilized. Design requirements, field conditions and dimensions need to be verified for compliance with the details, including but not limited to the following:
   * Free Rating (F-Rating)
   * Temperature Rating (T-Rating)
   * Leakage Rating (L-Rating)
   * Water Rating (W-Rating)
   * Acoustic Space
   * Pressure Test
   * Movement
   * Type and finish of fire-resistive construction
3. If reference details matching the field conditions are not available, manufacturer's engineering judgment drawings are acceptable. Contact Hilti Inc. for alternative systems or Engineering Judgment (800-879-8000) drawings shall follow the International Firestop Council (IFC) Guidelines for Evaluating and Providing Engineering Judgments.
4. References:
   a. 2013 International Building Code
   b. NFPA 70 - National Electric Code
   d. NFPA 220 - National Electric Code
   e. NFPA 220 - National Fire Code
   g. NFPA 30 - Hazardous Location Code
   h. NFPA 650 - Electrical Code
   i. NFPA 70 - National Electric Code
5. Firestopping System installation must meet requirements of ASTM E-114 (UL 94) test assemblies that provide a fire rating equal to that of construction being penetrated. Always refer to the manufacturer's engineering judgment drawings labeled with Hilti Firestop Label equipped with a QR code with the following information:
   * Warning - Do Not Disturb
   * Through-Penetration Firestop System
   * UL System - Product(s) used
   * Hourly Rating (F-Rating)
   * Temperature Rating (T-Rating)
   * Acoustic Space
6. For additional information on the details, refer to the Underwriter's Laboratories Fire Resistance Directory (volume 1.)
7. For other bases requiring protection, use only UL Listing specification 2230, 2235, or 2237, or see the following specifications for firestopping.
8. If firestopping system is required in any fire resistance rate (F-Rating) of the rated assembly, use a firestopping system listed and tested for the proper level of fire resistance.
PLASTIC PIPE THROUGH CONCRETE OVER METAL DECKING

**3 HR.**

**ALL TYPES OF PIPING**

**1.** Any modification to these details could result in an application/system not meeting the system requirements. If field conditions do not match details shown, required modifications to details shall be utilized. Design requirements, field conditions and dimensions need to be verified for compliance with the details, including but not limited to the following:

- **Fire Rating (F-Rating)**
- **Temperature Rating (T-Rating)**
- **Wetted Rating (W-Rating)**
- **Leakage Rating (L-Rating)**

2. Details shown are up to date as of February 2015. For additional information on the details, refer to the most current "Underwriter’s Laboratories, Fire Resistance Directory (Volume 1.)" or "Underwriter’s Laboratories, Fire Resistance Directory (Volume 2)."

3. If alternate details matching the field conditions are not available, approval of alternate details shall be obtained. Refer to the following specifications for firestopping:

- **NFPA 70 - National Electric Code**
- **UL or Intertek Classification**

4. References:

- **2013 Underwriter’s Laboratories Fire Resistance Directory, Volumes 1 & 2**
- **Plastic Pipe Through Concrete Over Metal Decking (3-HR.)**
- **Multiple Metal Pipes Through Concrete Over Metal Decking (3-HR.)**
- **Cable Bundle Through Concrete Over Metal Decking (3-HR.)**

5. For Quality Control requirements, refer to the Quality Control portion of the specification.

6. For outlet boxes requiring protection, use only Wall Opening Attach Device with Metal Deck Adapter Kit.

7. For other boxes requiring protection, use only Wall Opening Protective Mats, category C17 as classified by Underwriter’s Laboratories, Fire Resistance Directory (Volume 1.)