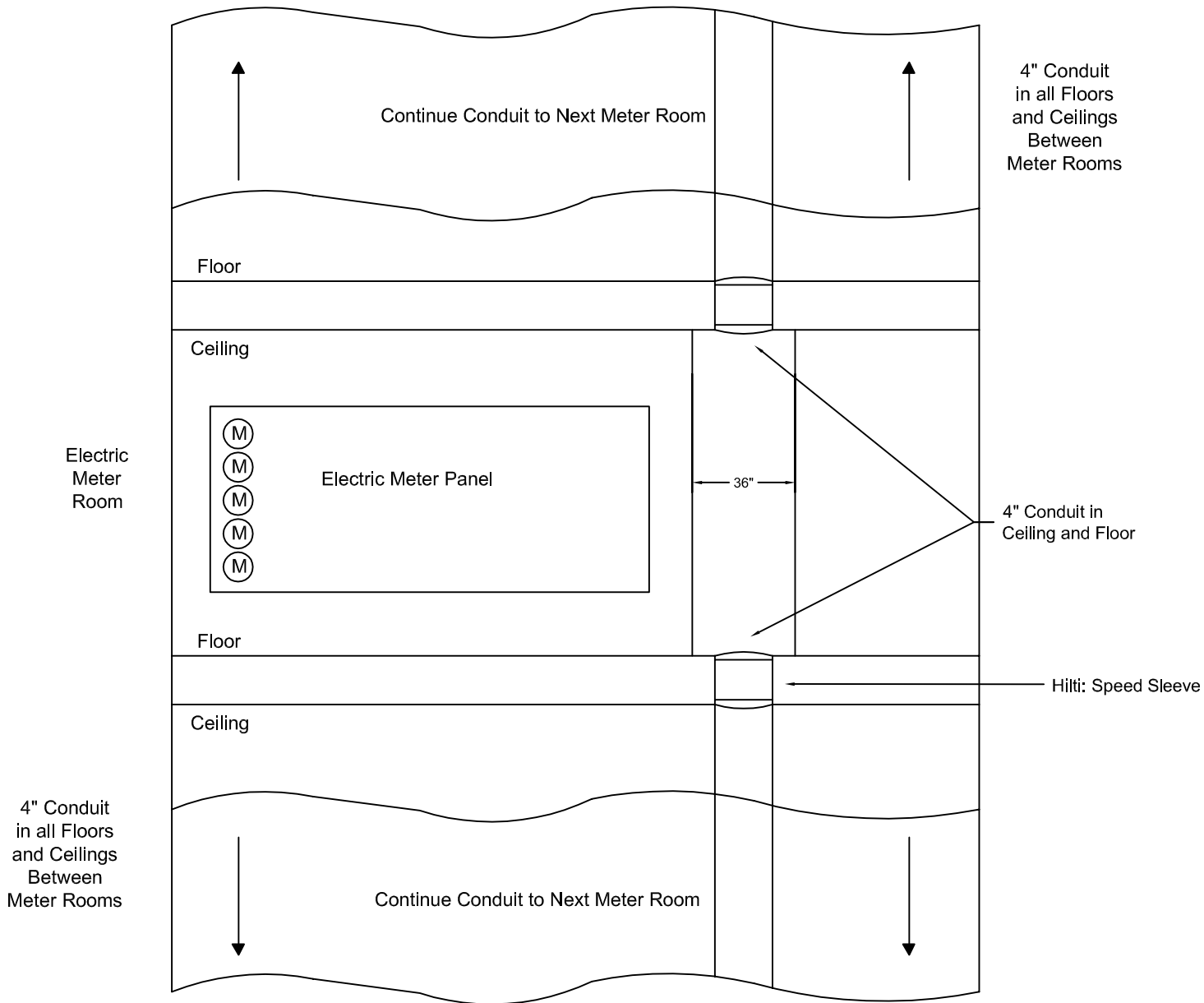


## **HIGH RISE METERING & MULTI-FLOOR INFRASTRUCTURE REQUIREMENTS**

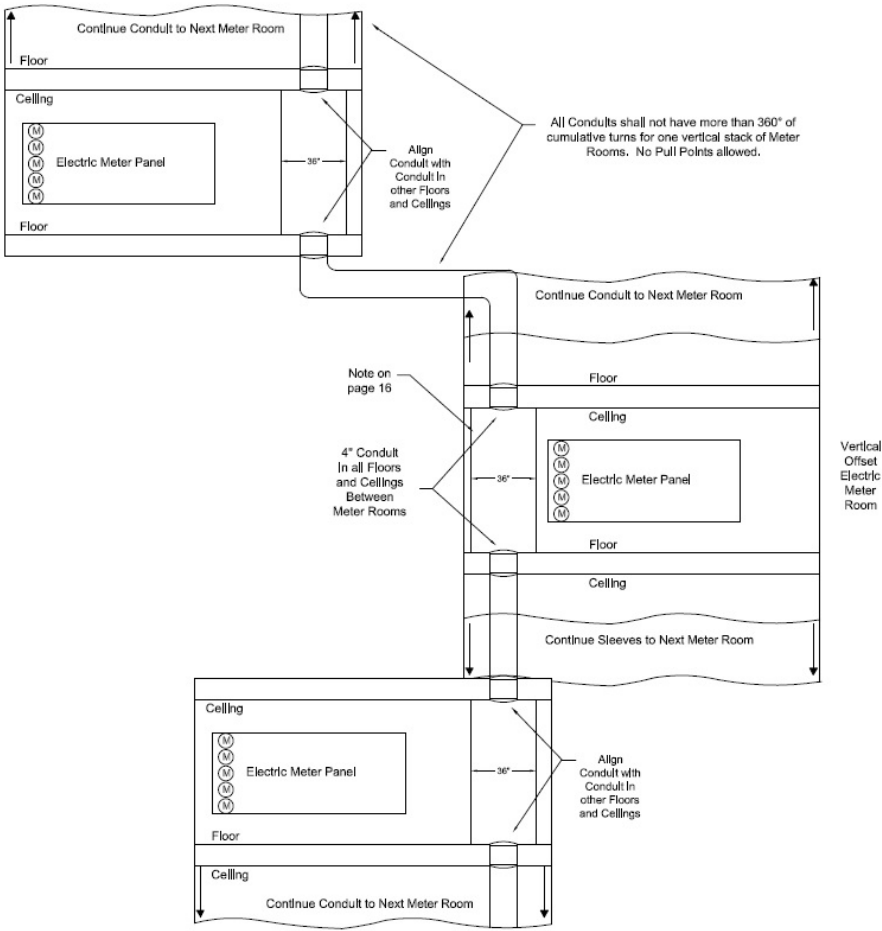
A High Rise building is defined as a building larger than three stories.

- Meter rooms located inside shall be approved by NES Meter Department during the design phase, or be located outside.
- **Meter rooms located inside shall not be any closer than one per three floors.**
- All residential meter centers shall be modular grouped installations with individual breakers, and on the approved meter base list (<http://www.nespower.com/guidelines.html>). Such equipment shall be referred NES Meter Department prior to making commitments for the purchase and installations of such equipment.
- All meter locations shall be subject to NES Meter Department.
- Meter Base Sockets may be located inside an electrical equipment room that shall be used solely for power equipment. No Communications or like equipment shall be in Meter Room.
- A location near the door for installation of a **Key box**, a key fitting the equipment room door for the key box, and a sign on the exterior door stating "Electrical Room #xx." If multiple equipment rooms are needed, each equipment room door shall have a dedicated key box with key. If door locks are changed, contact NES to coordinate the exchange of new keys
- Customer will supply a 36" plywood board floor to ceiling in meter rooms that will be used for radiating coax. This board shall have a 36" front working clearance at all times.
- Meter rooms shall have a 4" Hilti "*Speed Sleeve*" or an equivalent sleeving product with a 4hr fire stop cloth centered in front of the 36" plywood board.
- Any floor that the radiating coax will pass through that does not have a meter room, the coax shall have a continuous piece of 4" schedule 40 PVC conduit.
- All conduits shall not have more than 360 degrees of cumulative turn for one vertical stack of meter rooms. The only openings allowed in conduit are in electrical meter room. (No pulling points in conduit)
- Conduit shall continue to the roof into an NES approved CT cabinet (32" x 32" x 15") on the roof. Customer shall provide a dedicated 20 amp circuit outlet in CT cabinet. From the CT cabinet the customer shall provide a 2" conduit to a structure 36" taller than any other structure on the roof. Conduit shall also continue to lowest floor electric meter room.
- if lowest floor meter room is at or below grade, meter room shall have an NES approved CT cabinet installed with a 2" conduit that runs to the exterior of the building. The point at which it exits the building must be between 8' and 10' with an 8" x 8" x 6" 3R Nema rated enclosure.
- Before any bus duct is energized all meter sockets shall be covered, sealed, and tagged with a transparent plastic cover plate provided by the customer, or all main disconnects will be locked out with NES company lock.

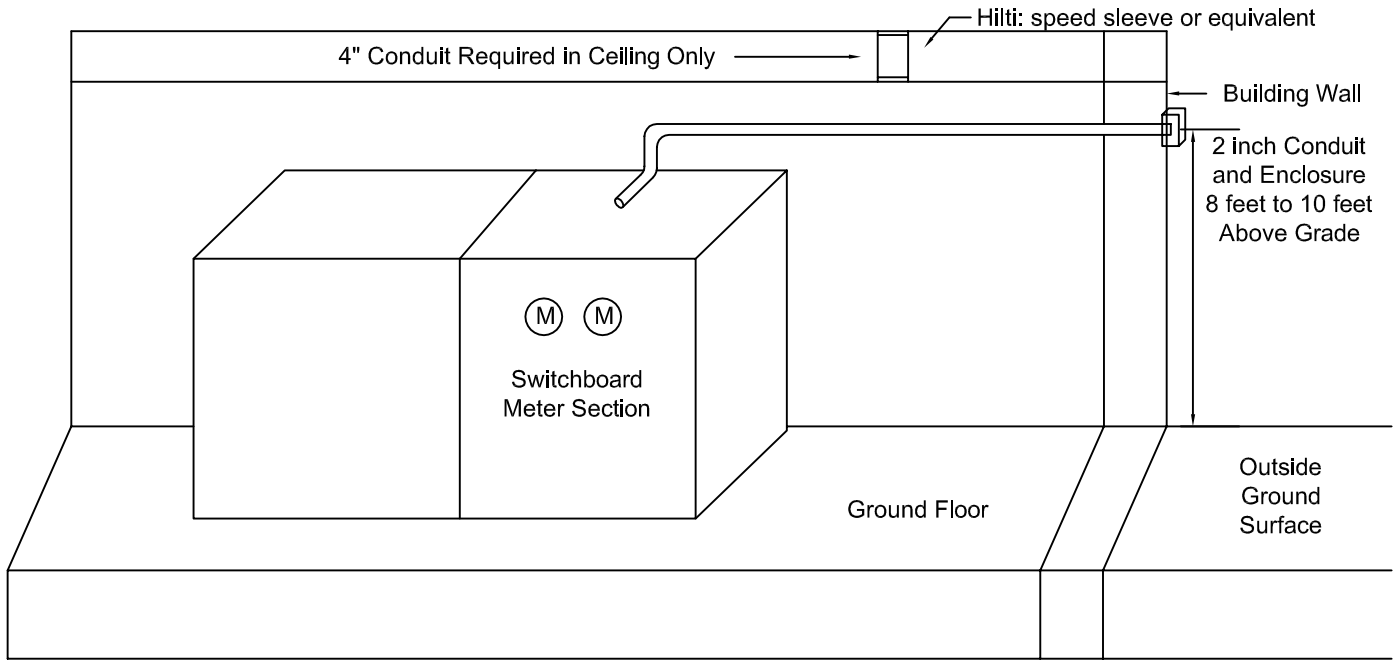
Detail A: Above Grade Meter Rooms



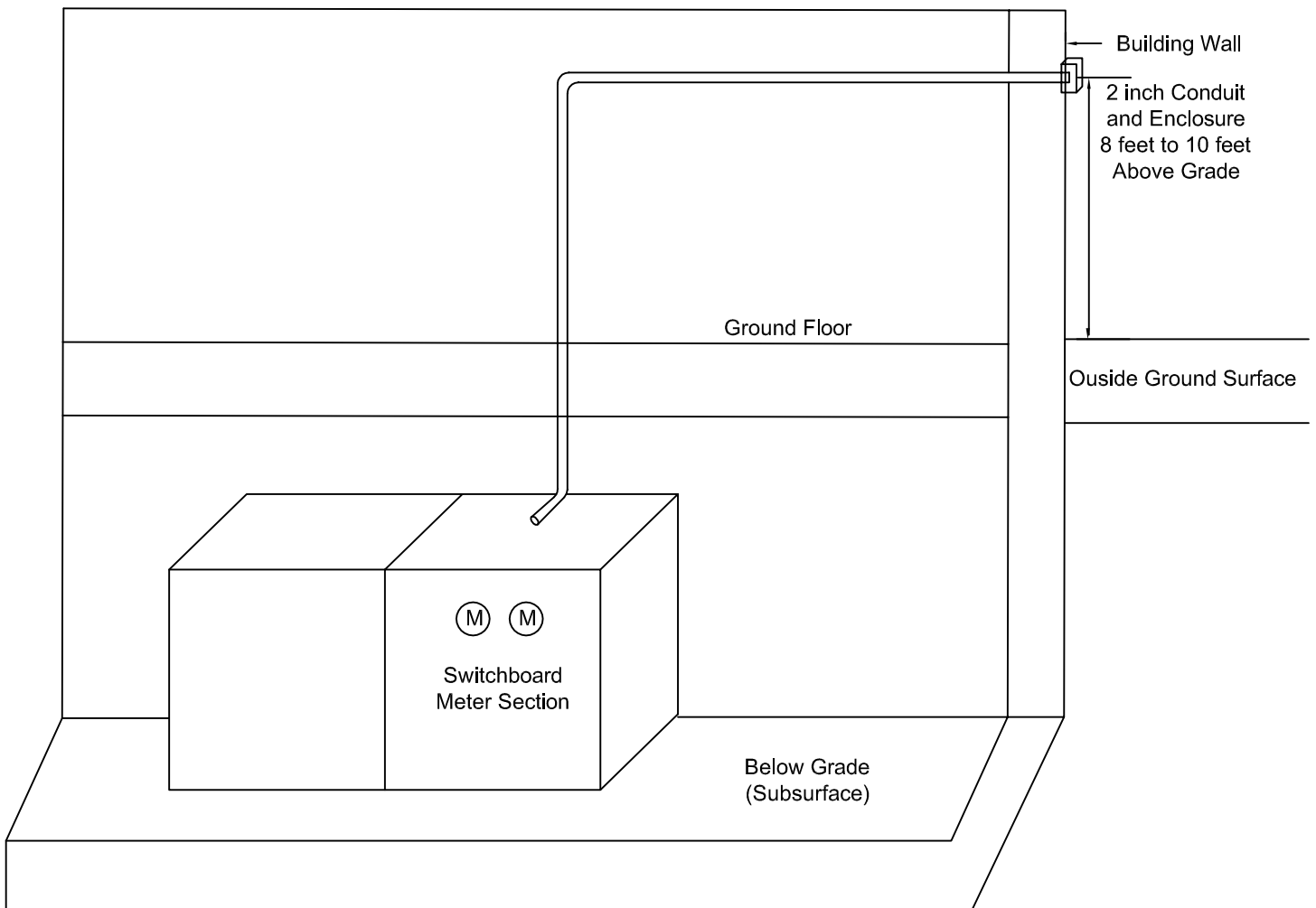
Detail E - Vertically Offset Meter Rooms



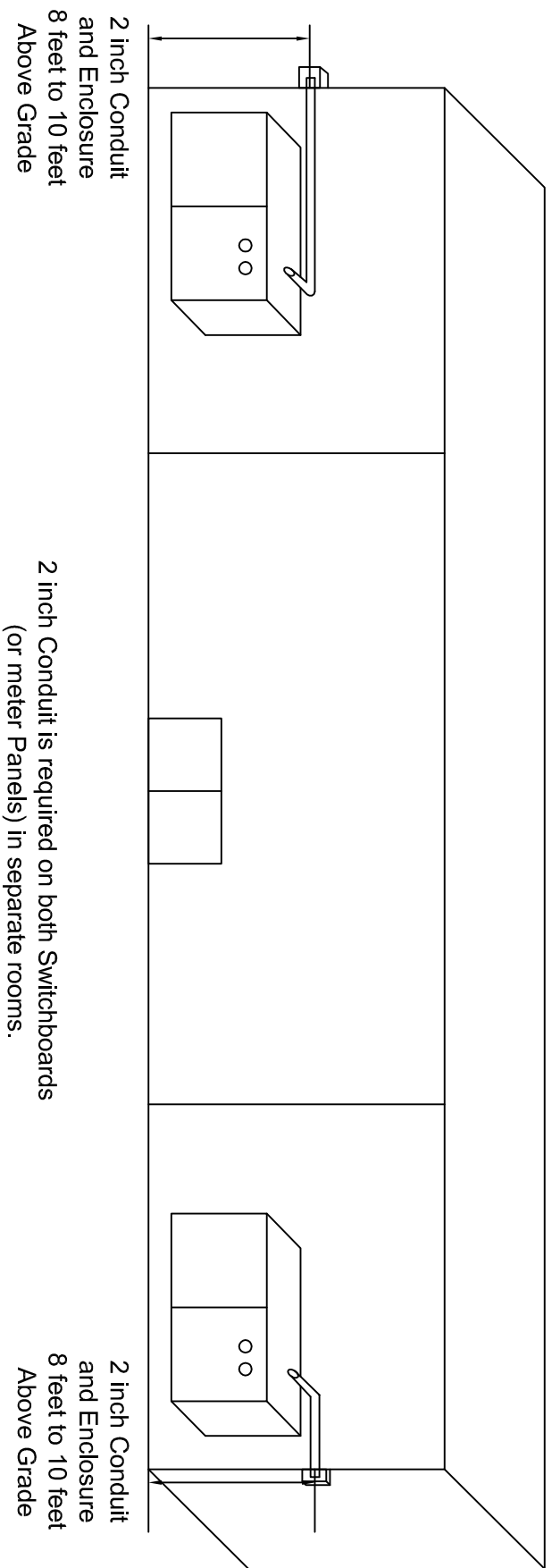
Detail C- Indoor Electric Meter Room at Ground Floor



Detail D- Indoor Electric Meter Room Below Grade (Subsurface)



Detail E - Multiple Electric Meter Rooms at or Below Ground Floor

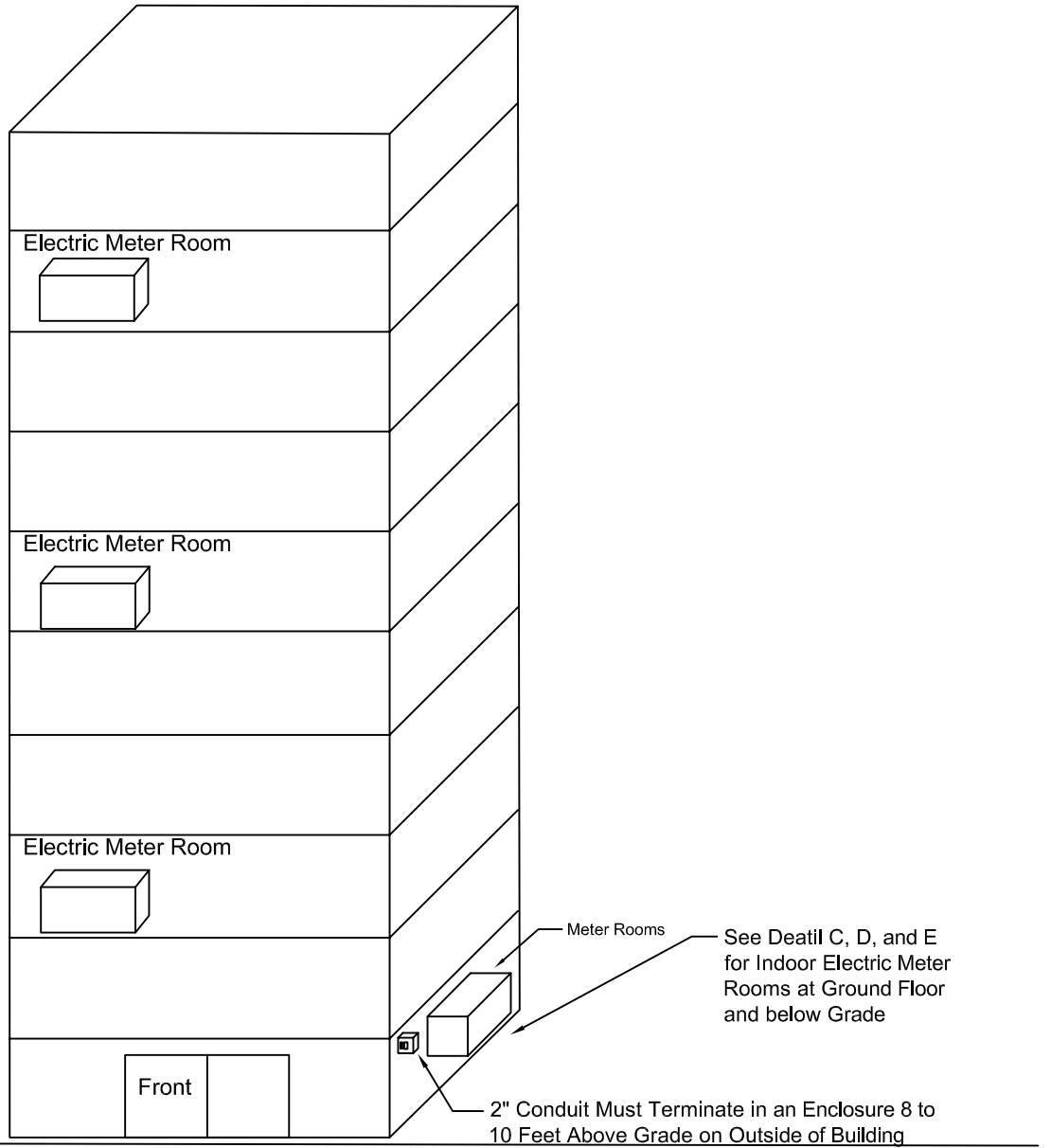


2 inch Conduit  
and Enclosure  
8 feet to 10 feet  
Above Grade

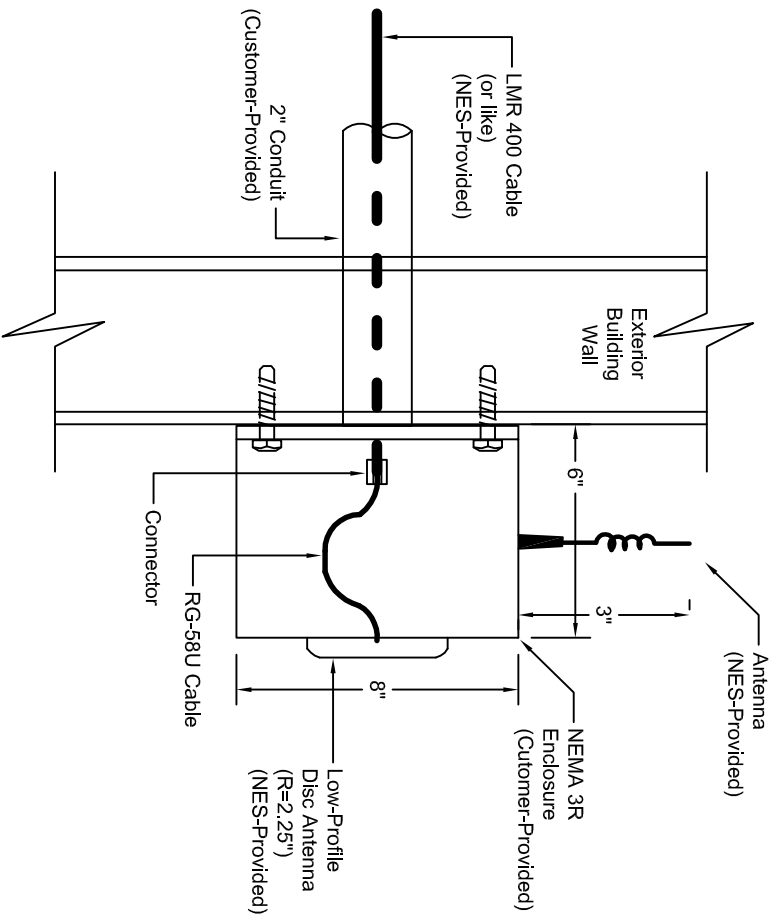
2 inch Conduit is required on both Switchboards  
(or meter Panels) in separate rooms.

2 inch Conduit  
and Enclosure  
8 feet to 10 feet  
Above Grade

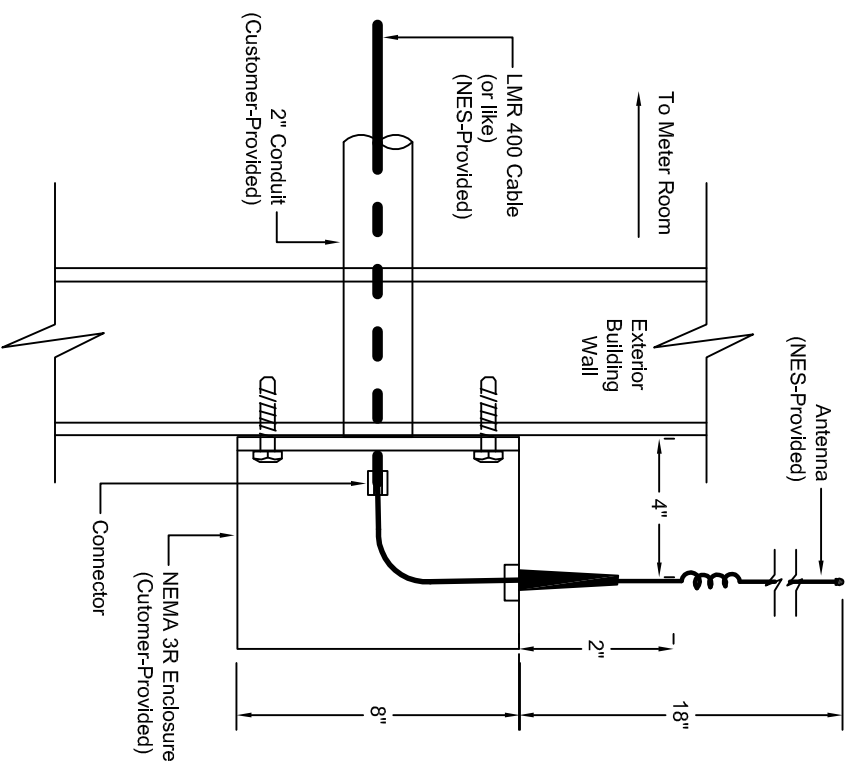
High Rise Building with Indoor Electric Meter Rooms



Street (Building Address)

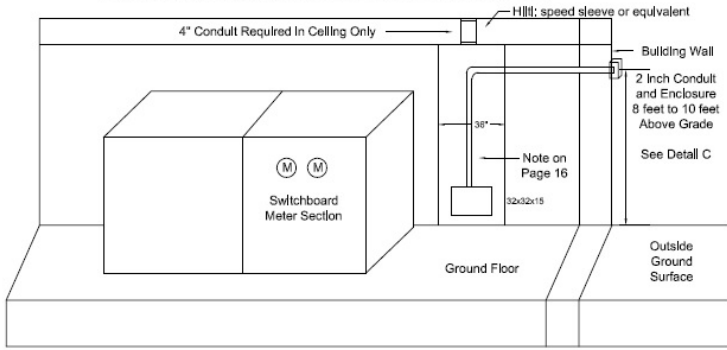


DISC ANTENNA ENCLOSURE

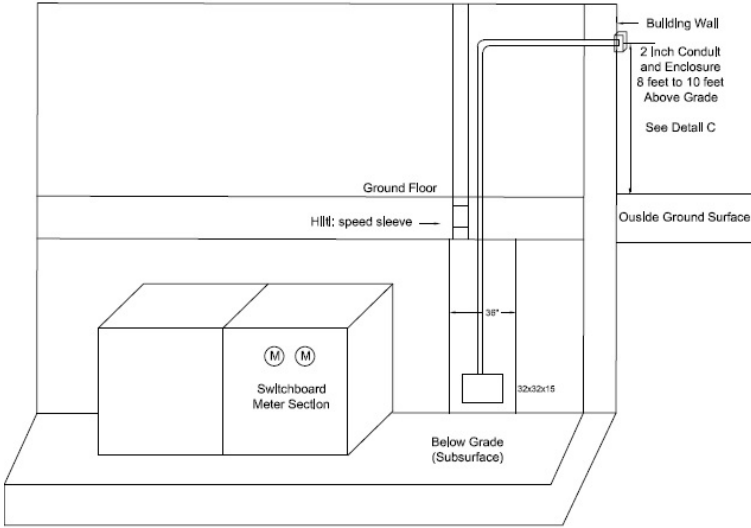


14" ANTENNA ENCLOSURE

Detail H - Bottom Floor of Vertical Stack Multi-Floor Indoor Meter Rooms



Detail I - Indoor Electric Meter Room Below Grade (Subsurface)





## Speed Sleeve (CP 653)

### Product description

- Re-penetrable cable management device for electrical and telecom professionals

### Product features

- Fast installation
- Easy penetration and re-penetration
- Low L-ratings
- Withstands the rigors of usage and time
- Can be installed in wall and floor applications

### Areas of application

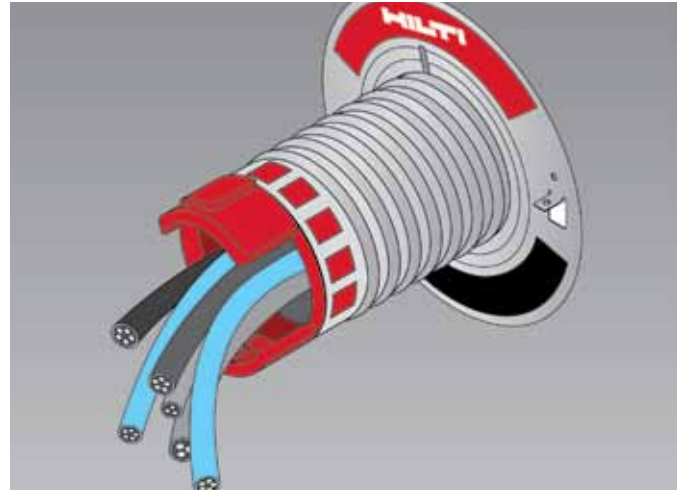
- Cable and cable bundles

### For use with

- Concrete floor rated up to 3 hours
- Gypsum walls rated up to 4 hours

### Examples

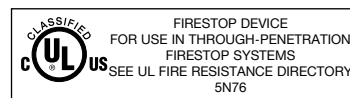
- Electrical wiring
- Premise wiring
- Low voltage and datacom



Technical Data	CP 653	
	2" (50 mm)	4" (102 mm)
OD (device only)	2.3" (60 mm)	4.3" (110 mm)
OD (flange)	4.7" (120 mm)	6.7" (170 mm)
ID	1.7" (48 mm)	3.6" (92 mm)
Total length	12.4" (315 mm)	12.4" (315 mm)
Weight (device and flanges)	1.5 lbs	2.6 lbs
Temperature resistance	22° F to 212° F (-6° C to 100° C)	
Intumescent activation	Approx. 320° F (160° C)	
Expansion ratio (unrestricted)	1:40	
Metal	Steel with zinc coating	
Plastic	ABS	
Fabric	Glass-fiber	

#### Tested in accordance with

- UL 1479
- ASTM E 814



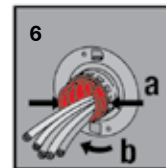
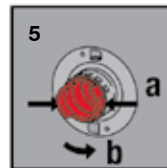
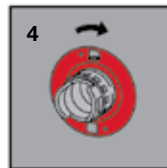
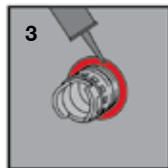
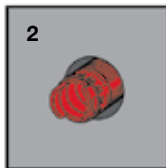
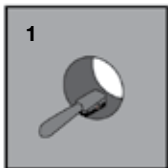
## Installation instructions for CP 653

### Notice

Always refer to the MSDS before use and the UL Fire Resistance Directory or Hilti Firestop Systems Guide for complete installation information.

### Instructions for use

1. Use hole saw to create the appropriate hole.
  2. Insert the sleeve.
  3. Seal the gap with firestop sealant to impede smoke and gas migration. Repeat on other side of the wall
  4. Spin the flange clockwise onto the device. Repeat on other side of the wall.
  5. To open the device:
    - (a) On one side of the wall, press the clip closures inward.
    - (b) Twist the device counterclockwise and pull the red housing outwards to eliminate the bunching of the smoke seal fabric. A yellow label will be visible to indicate that the device is open.
  6. To close the device:
    - (a) On the same side of the wall, press the clip closures inward.
    - (b) Twist the device clockwise until finger-tight, allowing it to engage with a click.
- For re-penetration of cables, repeat steps 5 and 6.  
For installation options not presented here, consult your local Hilti representative for other rated firestop systems.



**Hilti Firestop**  
Saving lives  
through innovation  
and education

**Hilti. Outperform. Outlast.**