KFCi

Antenna Transmitter Installation Manual

King-Fisher Company, inc.

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King Fisher Company in effort to improve customer communication and provide superior technical support has established a simple to remember technical support number available 8am - 5pm (US - Central Time Zone), Monday thru Friday.

When you are having difficulty with your system or have an installation question, it is our commitment to resolve the issue in the most efficient and timely manner. Our goal is to provide you with the most personalized, consistent and professional experience with every contact, no matter who you speak with.

As always, we welcome your feedback so we can make our support process as effective as possible for you. Feel free to call (888)OUR-KFCI or email us at support@kfco.com.

INSTALLATION OF THE KING-FISHER

Aluminum / Alodine Transmitter Antenna

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Special Instructions

1. Antenna shall be installed in accordance with FCC 90-241 in the Public Service Band and 20 Feet Height Minimum for the Non-Public Service Band.

2. Antennas to be mounted in areas where there is a suspected weak signal should be "Location Tested" prior to permanent installation. A temporary antenna/transmitter assembly used to send signals to the receiver that assure the signal is received accomplishes location testing. A6-10db attenuator should be used for this test.

3. On any metal enclosed or roof structures, the antenna shall be mounted outside and toward the receiving antenna.

Preliminary Antenna Installation Instructions

1. If the transmitter is not located under the antenna, then find a suitable position on the outside wall to mount a waterproof "metallic only" junction box (Red Dot 2INDS-3 Rain Tight J-Box).

2. Measure and cut an appropriate length of cable to reach from the antenna to the transmitter. Use RG-58U cable Supplied in (KF Value Pak) for lengths up to 75' and RG-8/U for lengths of 75' to 260' long (specified lengths must be ordered).

3. Attach a PL-259 Male Coax connector to the end of the cable that will be fitted to the antenna. This will require soldering.

4. Cut conduit support pipe (Rigid 1" Galvanized or Aluminum is recommended) to the required length and thread both ends.

5. If the antenna is to be mounted to a wall with the antenna below the rooftop, offset the support pipe by 2' minimum (see Figure 4).

6. The following (3) Steps will assure proper and successful installation of the radio antenna:

Step Number 1 in the Process

Note: Assemble all parts on the ground unless otherwise specified.

1. Slip **Antenna Skirt** over **Support Pipe** as shown in **Figure 1**.
2. Pull the **Coax Cable** through the **Support Pipe** and junction box (or transmitter if applicable) leaving the end with the **PL-259 Connector** a the top (antenna) end of the **Support Pipe**.
3. Connect the **PL-259 Connector** to the **Antenna Whip Assembly**. Use slip/joint pliers to tighten this connection using care not to over or under tighten the connection. Wrap the connection with 3 or 4 laps of Electrical Tape.
4. Lubricate both ends of the **Support Pipe** with Silicon in the threads (**CAUTION**: do not use Teflon Tape). Screw the **Support Pipe** 2 or 3 turns into the **Antenna Whip Assembly**, turning only the **Support Pipe**. Hold the **Antenna Whip Assembly** steady to prevent the **Coax Cable** from twisting and kinking.

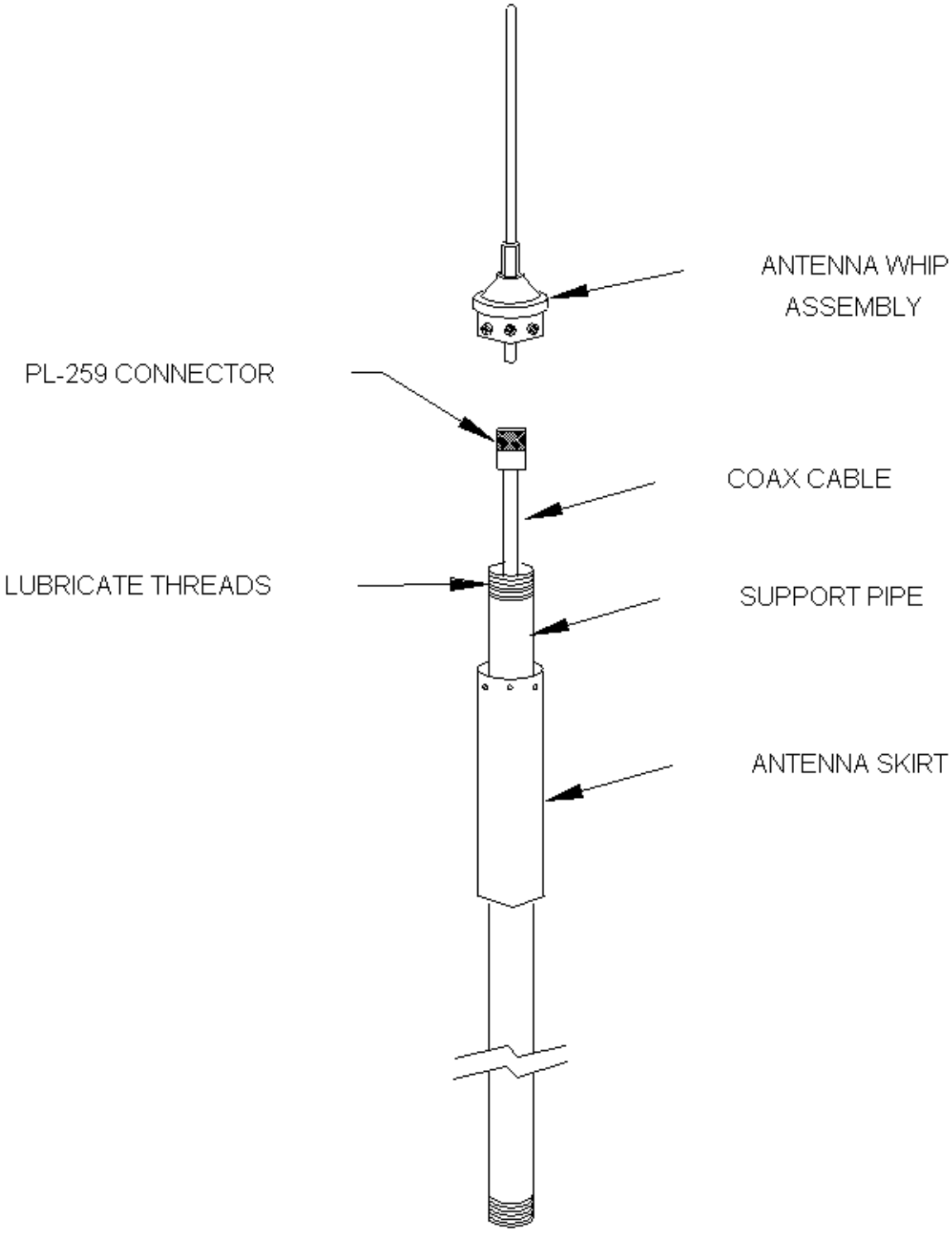
ANTENNA WHIP
ASSEMBLY
PL-259 CONNECTOR
COAX CABLE
LUBRICATE THREADS
SUPPORT PIPE
ANTENNA SKIRT

Figure 1

Step Number 2 in the Process

Note: Assemble all parts on the ground unless otherwise specified.

1. Slide the **Antenna Skir**t up to the **Antenna Whip Assembly** and align the mounting holes as shown on Figure 2.
2. Install the eight **Stainless Steel Screws** and **Washers** through the holes in the **Antenna Shirt** into the **Antenna Whip Assembly** and tighten securely.
3. Further secure the **Antenna Whip Assembly** to the **Support Pipe**. Being careful not to twist or damage the **Coax Cable**, twist from the **Support Pipe** while holding the **Antenna Whip Assembly** firm. It is suggested that Slip/Joint Pliers be used to hold the **Antenna Whip Assembly** while twisting the **Support Pipe** with a Pipe Wrench (**CAUTION**: grip the **Antenna Whip Assembly** over the **8 Stainless Steel Screws** (some models may only have 6 screws). This will prevent any crushing of the **Antenna Skirt**). This connection must be very tight to prevent future damage from vibration and high winds.
4. Screw the lower end of the **Support Pipe** into the metallic **Junction Box** (or Transmitter if applicable). Use a Pipe Wrench and make sure that any offset is aligned away from the wall (see Figure 4).

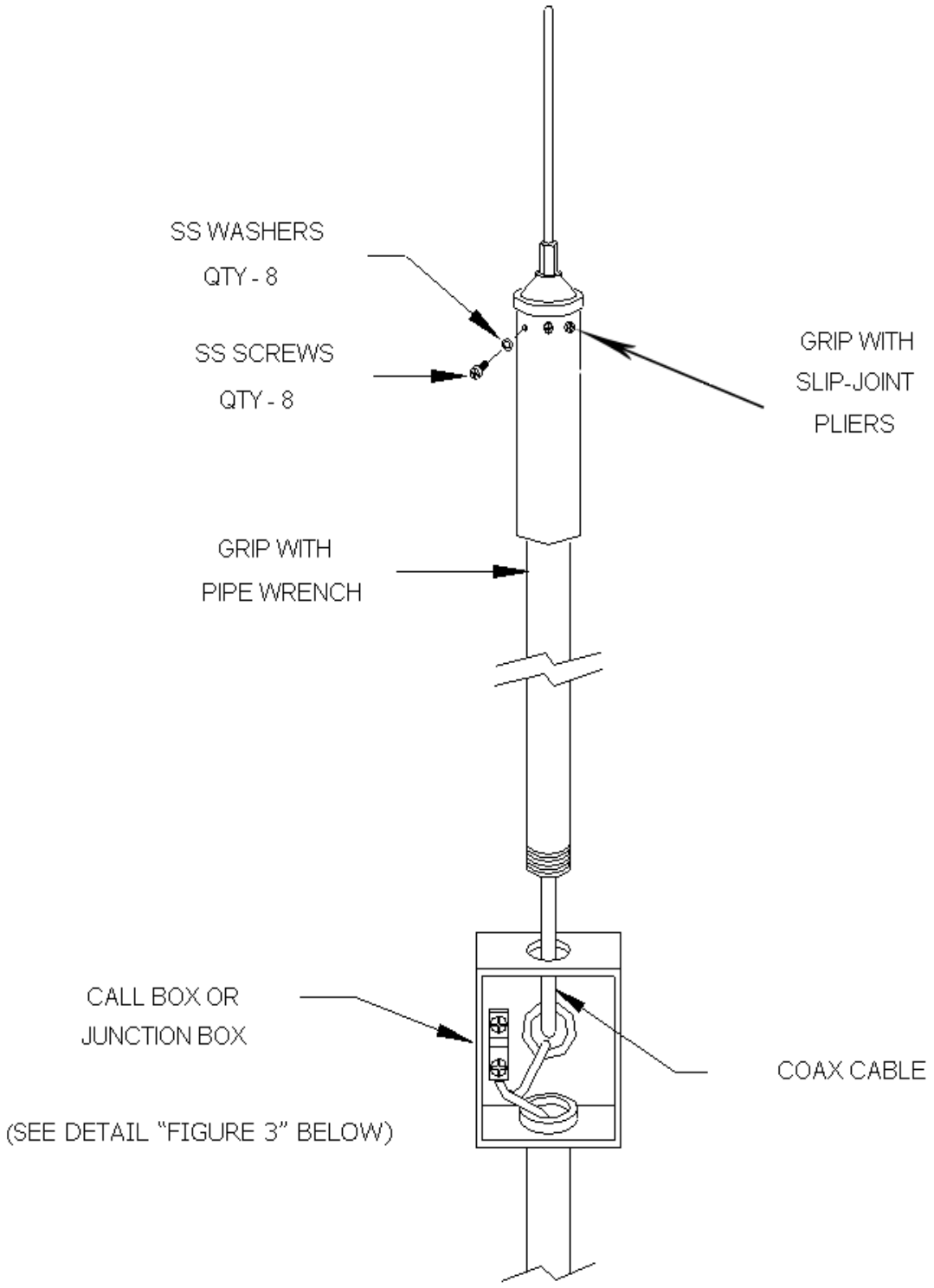
SS WASHERS
QTY - 8
SS SCREWS
QTY - 8
GRIP WITH
SLIP-JOINT
PLIERS
GRIP WITH
PIPE WRENCH
CALL BOX OR
JUNCTION BOX
(SEE DETAIL "FIGURE 3" BELOW)
COAX CABLE

Figure 2

Step Number 3 in the process

Mounting and wiring of the Antenna

1. Complete conduit run to applicable Transmitter or Interface Panel. This includes the drilling of a hole through the outside wall to the **Junction Box** (or Transmitter if applicable).

2. Strap the **1" Conduit Support Pipe** (with attached **Antenna Whip Assembly**) securely to the building, tower, pole or other such structure (**CAUTION**: check with the local Codes and Standards for the proper holding strength of the antenna straps). The Antenna structure shall be able to withstand all wind loading and safety factors.

3. If the **Transmitter** is mounted inside the building, pull the **Coax Cable** through the conduit to the Transmitter Panel. Leave a **Drip Loop** in the **Junction Box** taking care not to twist, stress or kink the **Coax Cable**. See Figure 3.

4. Trim excess **Coax Cable** and attach the proper connector (PL-259 or BNC) at the **Transmitter** (see Transmitter Installation Instructions) and attach **Coax Cable** to the Transmitter.

5. Ground the **Conduit Support Pipe** at the **Conduit Support Pipe** or the **Threaded (metallic only) Junction Box** (or Transmitter if applicable). Connect the **Ground Cable** to a ¾" x 10' buried Ground Rod, Building Steel or Cold Water Pipe in accordance with the NEC.

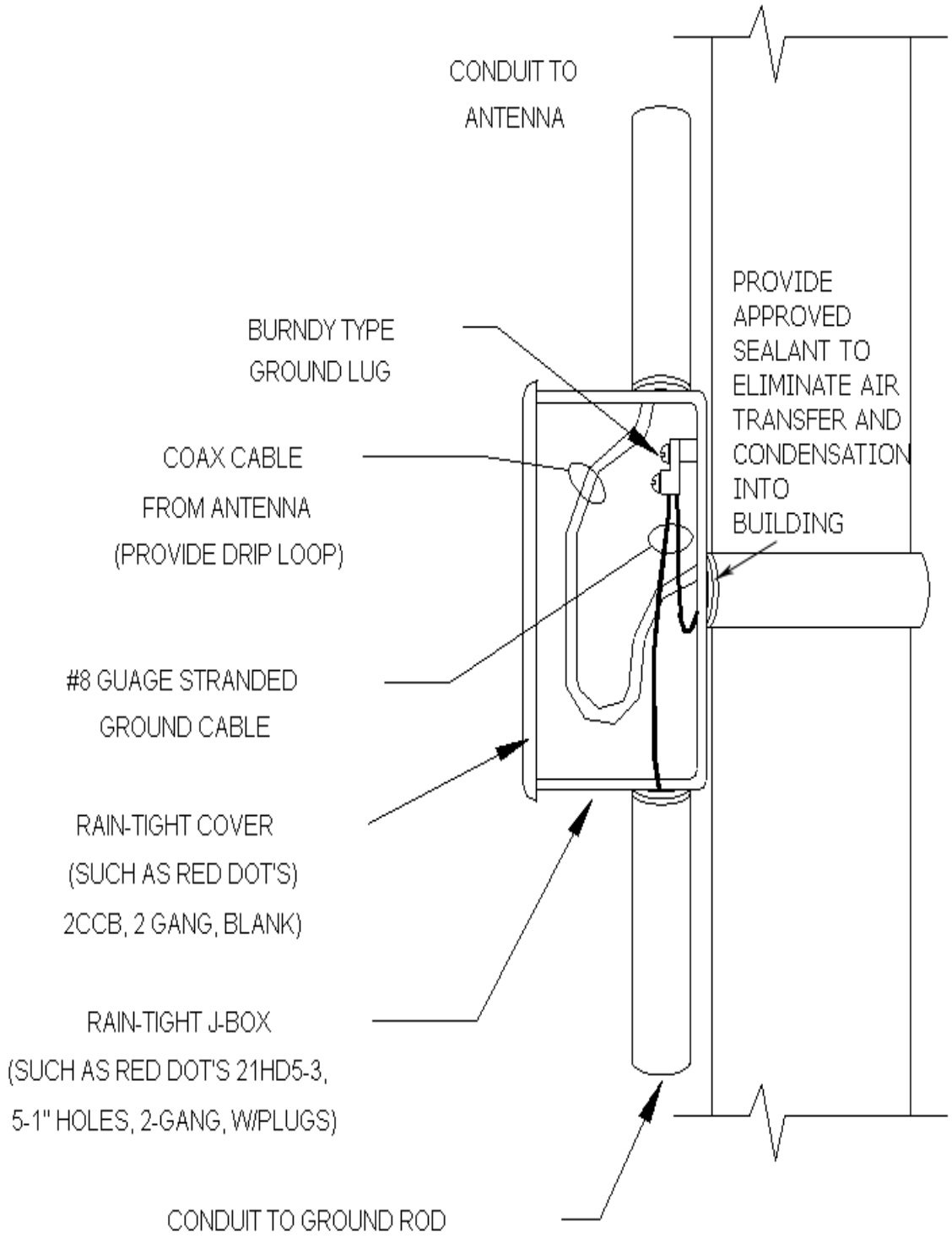
CONDUIT TO
ANTENNA
PROVIDE
APPROVED
SEALANT TO
ELIMINATE AIR
TRANSFER AND
CONDENSATION
INTO
BUILDING
BURNDY TYPE
GROUND LUG
COAX CABLE
FROM ANTENNA
(PROVIDE DRIP LOOP)
#8 GUAGE STRANDED
GROUND CABLE
RAIN-TIGHT COVER
(SUCH AS RED DOT'S)
2CCB, 2 GANG, BLANK)
RAIN-TIGHT J-BOX
(SUCH AS RED DOT'S 21HD5-3,
5-1" HOLES, 2-GANG, W/PLUGS)
CONDUIT TO GROUND ROD

Figure 3

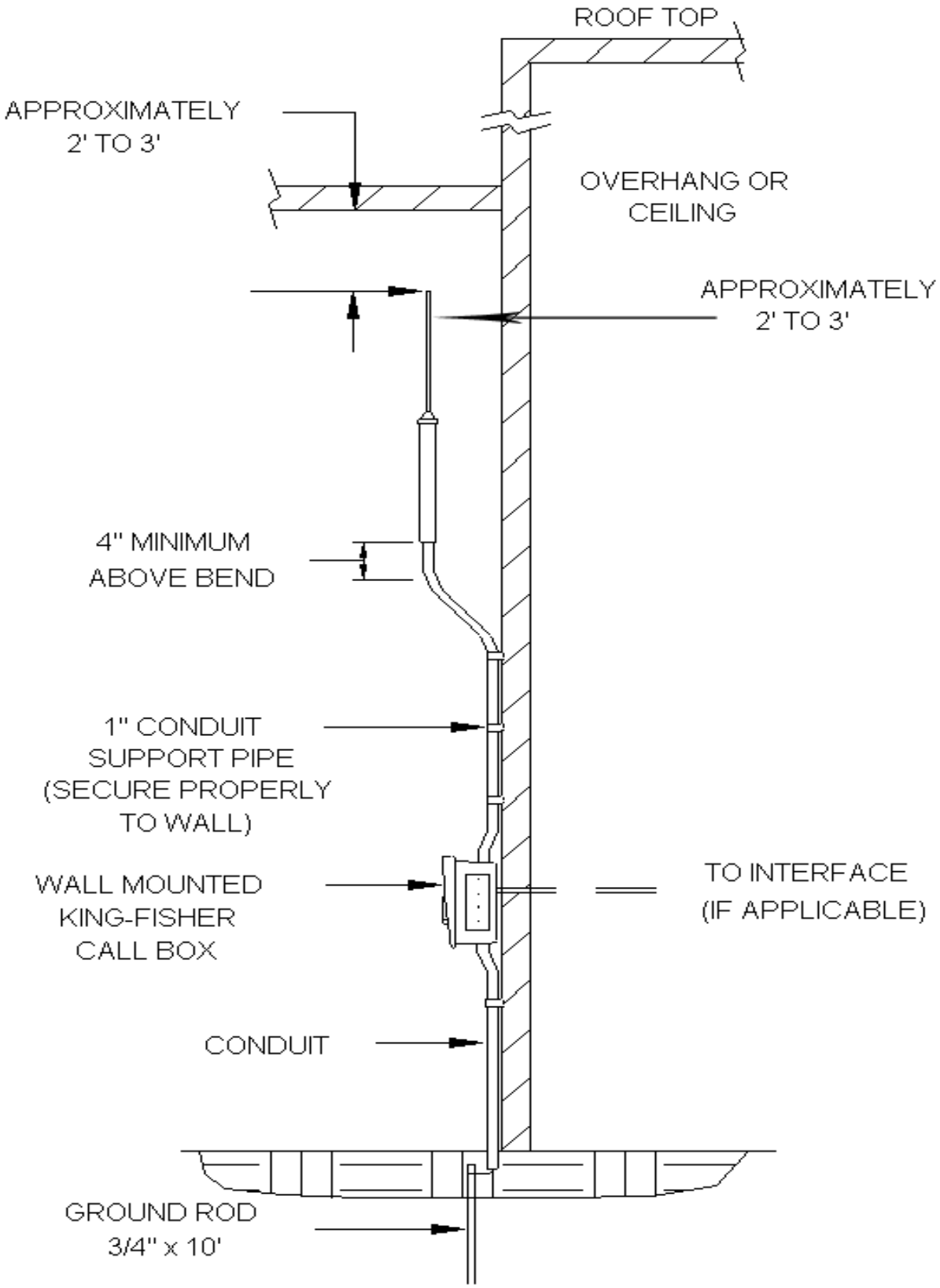
ROOF TOP
APPROXIMATELY
2' TO 3'
OVERHANG OR
CEILING
APPROXIMATELY
2' TO 3'
4" MINIMUM
ABOVE BEND
1" CONDUIT
SUPPORT PIPE
(SECURE PROPERLY
TO WALL)
WALL MOUNTED
KING-FISHER
CALL BOX
TO INTERFACE
(IF APPLICABLE)
CONDUIT
GROUND ROD
3/4" x 10'

Figure 4

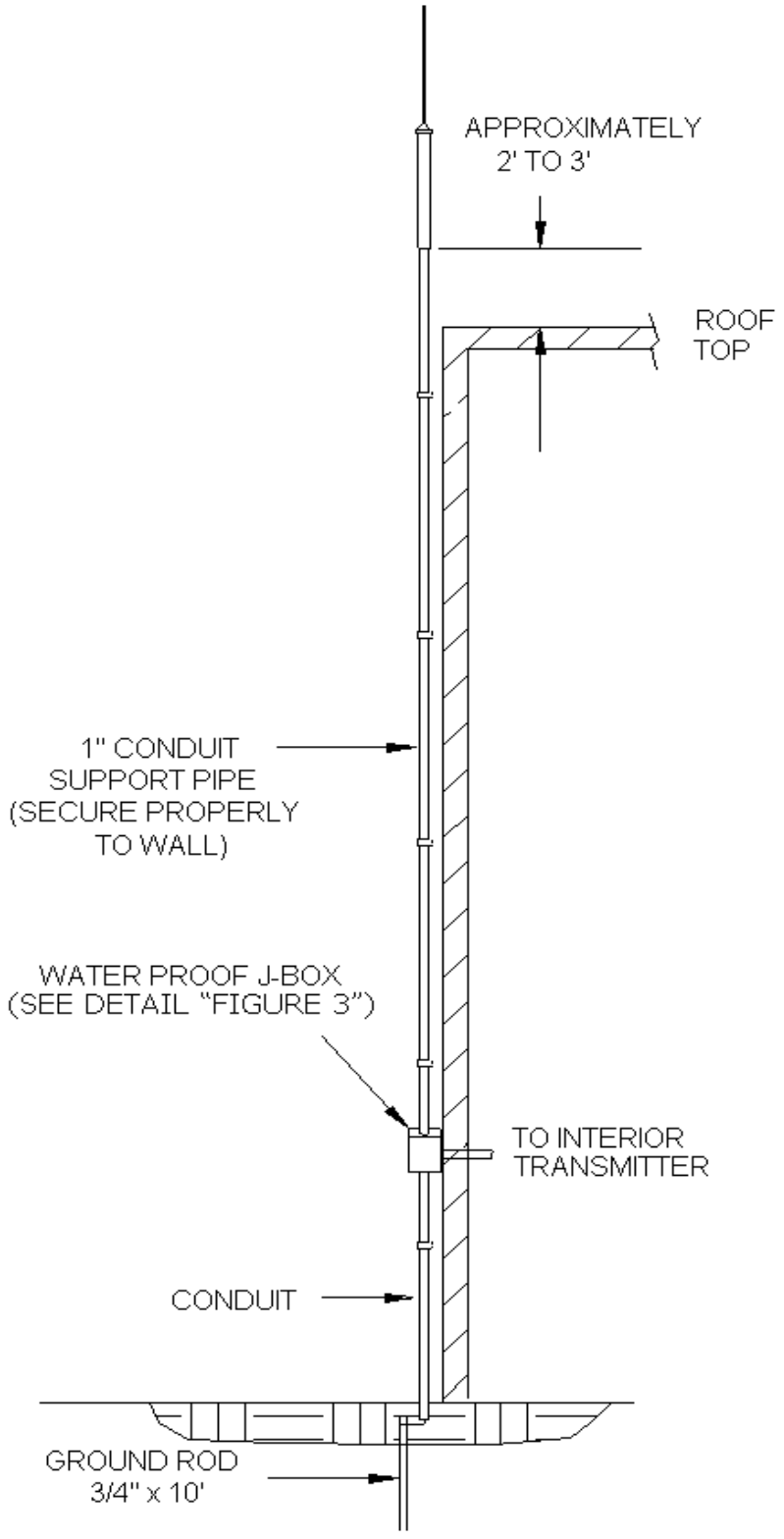
APPROXIMATELY
2' TO 3'
ROOF
TOP
1" CONDUIT
SUPPORT PIPE
(SECURE PROPERLY
TO WALL)
WATER PROOF J-BOX
(SEE DETAIL "FIGURE 3")
TO INTERIOR
TRANSMITTER
CONDUIT
GROUND ROD
3/4" x 10'

Figure 5

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