

# 3M™ EMS Warning Tape 7900 Series Installation Instructions



**CAUTION**

*Working around energized systems may cause serious injury or death. Installation should be performed by personnel familiar with good safety practice in handling electrical equipment. De-energize and ground all electrical systems before installing product.*

## 1.0 Introduction

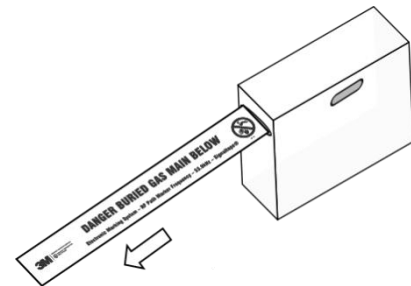
1.1 3M EMS Warning Tape is designed to be placed above underground utilities and is located with compatible EMS Locators. It helps provide an accurate, convenient, long lasting method of marking underground facilities and enables you to return to the location of the marked underground utility's path.

1.2 The 3M EMS Warning Tape does not use a continuous metallic wire and does not require any type of electrical splicing or access points.

## 2.0 Open Trench Installation

2.1 Place the pipe/cable in the trench.

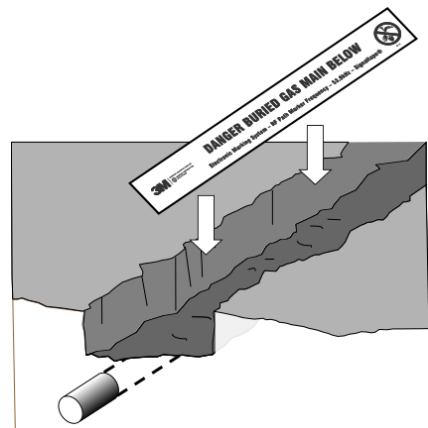
2.2 Position the box of Warning Tape so the tape can be pulled out of the feed port.



2.3 Pull the tape (printed side up) flat into the trench. • Place the tape above the buried plastic pipe and keep tape within 4' (1.2m) of final grade.

**Note: The tape is designed to act as an early warning to excavators. It is recommended that the tape be placed within 12 inches of the surface.**

**Note: The 3M EMS Warning Tape has a direct bury limit of 4' and must be 4" (10 cm) away from any metal in all directions to provide the best locatable signal. Test the tape after installation with a compatible EMS locator.**



## 3.0 Path Marking “Best Practices”

3.1 The placement of the path marking system provides a long-term solution for identifying and locating underground facilities. Traditional metal pipe or cable locating uses a transmitter and a receiver. The transmitter is used to apply a signal and the receiver is used to locate the signal that is travelling along a continuous metal conductor, like a tracer wire. The 3M Warning Tape solution does not require a transmitter because the system utilizes EMS markers. Using EMS markers for path marking virtually eliminates problems related to continuity and congestion.

3.2 When locating the 3M EMS Caution Tape, it is recommended that an initial locate marking be done using temporary paint dots or flags, to mark the path locate. When the path has been outlined then add final markings.

3.3 For Deep Applications - When a utility is deeper than 4' then place enough backfill on the utility to place the 3M caution tape within 4' locate depth.

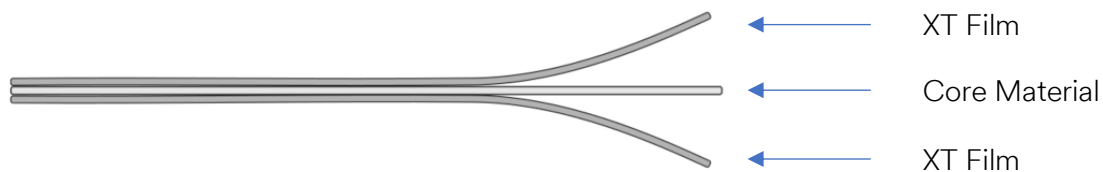
3.4 For Early Warning Applications – Place the tape between the underground utility and final grade. Place the tape within 12 inches of final grade to provide excavators a warning when digging.

3.5 When marking segments shorter than 20 feet, it is recommended that two to three markers on the 3M™ Warning Tape be pulled closer while keeping the markers aligned and lying flat in the trench.

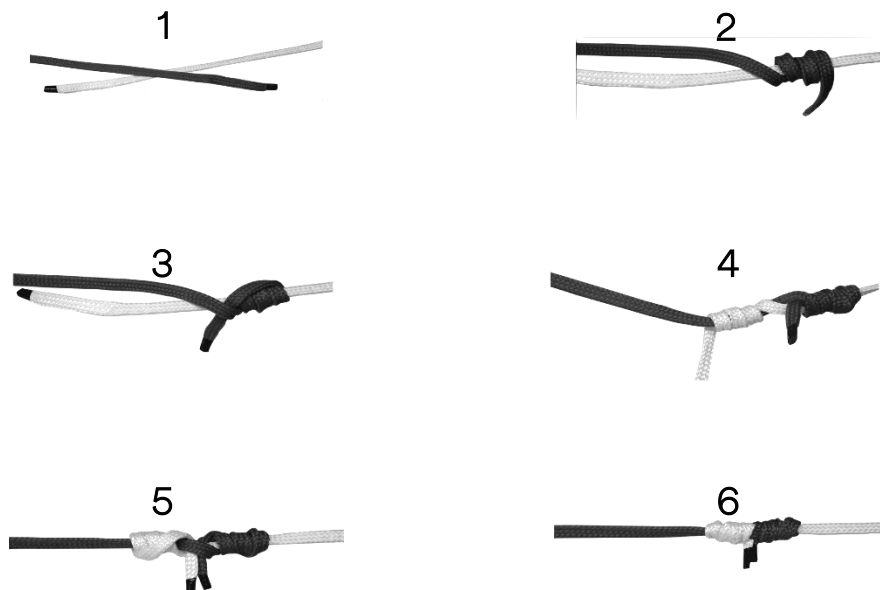
## 4.0 Joining XT Tape

4.1 The core material of the XT tape can be joined by either overlapping by 20 feet or tying the core material of each segment together. To tie the core material:

4.2 Peel back the two layers of film to expose the core material of the two tapes to be connected.

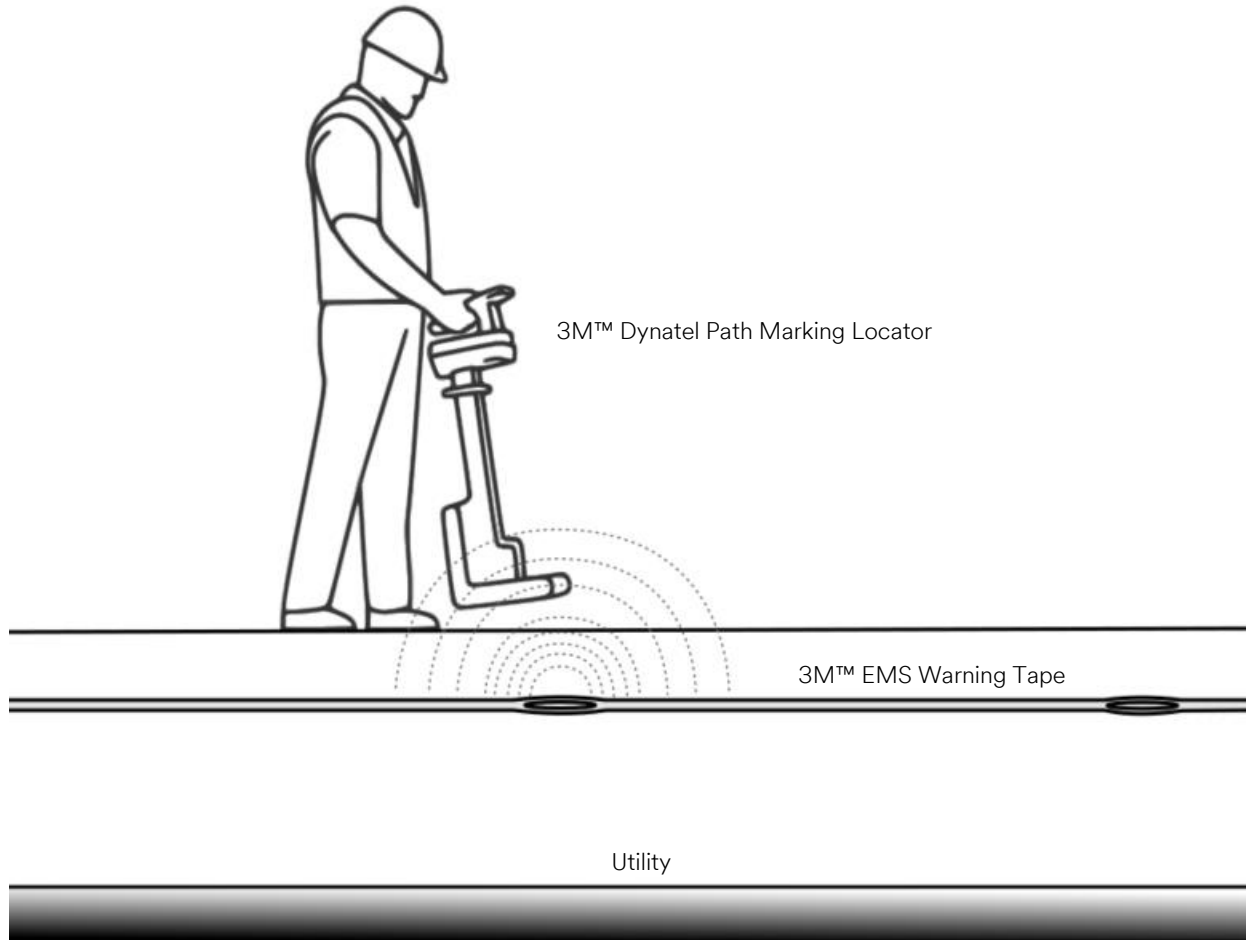


4.3 Tie the core material of each section with any strong knot. A Blood Knot works well.



## 5.0 Locating EMS Tags

- 5.1 Refer to your locating equipment instructions for locate operation. The 3M™ EMS Warning Tape is a passive electronic RF marker that responds to compatible Path Marking Locators.



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