

New York State Thruway Authority

**Design and Construction
Requirements for Unencased Gas
Pipelines**



Office of Real Property Management

TAP-421E (1/2010)

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I. INTRODUCTION

All installations of unencased gas pipelines shall conform to the requirements described in Design and Construction Requirements for Underground Crossings of Mainline Pavement and Shoulders (TAP-421B) as well those described below.

The specifications referred to in this section are detailed in the *Occupancy and Work Permit Specification Diagram: Unencased Gas Pipelines under Pavement & Adjacent Authority Property* available from the Division Permit Coordinator.

II. STATEMENT OF REQUIREMENT

As an alternative to encased gas pipe installations, the Authority may approve unencased crossings, provided the proposed crossing meets the following requirements:

A. CARRIER PIPE

When the Authority determines that there is a possibility of having foreign materials in the subgrade, that unusual potential for third party damage exists or that there are other appropriate reasons, special protection of the carrier pipe will be required. Special protection may require, but not be limited to: concrete jacketed steel pipes; the placement of protection slabs above the pipe; an increase in the depth of bury; or other means. In all installations, soil borings are required to determine soil characteristics and to identify if foreign material is present in the bore. The Permittee shall perform soil borings and submit reports for review prior to construction activities. Soil exploration data are required for plan approval. The applicant shall contact the Authority Division Director or designee for bore location and depth requirements, and to obtain Work Permits prior to this activity, as described in TAP-401.

B. UNENCASED GAS LINE

Unencased gas line pipes under Thruway pavement (mainline, shoulders and ramps) shall not be less than ten (10) feet from the pavement/surface to the top of the pipe at the closest point. At all other locations on Authority Property, the minimum ground cover must be six (6) feet. Where it is not possible to secure the above depths, casing as specified in Design and Construction Requirements for Underground Crossings of Mainline Pavement and Shoulders, (TAP-421B), Section V. will be required.

C. BORING AND JACKING

Installations shall be bored or jacked, and shall have a bored hole diameter essentially the same as the outside diameter of the pipe plus the thickness of the protective coating. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe (including coating) by more than approximately one (1) inch remedial measures, as approved by the Authority, shall be taken.

D. UTILITY MARKING REQUIREMENT

All underground and aerial crossings shall be properly identified with markers at both Authority Property lines. Vent stand-pipes may serve as markers where appropriate. Markers shall include the type of installation (water line, gas pipeline, etc.) and the name of the Utility or agency responsible for repair of the installation. This marking must be durable and secure, and be approved by the Authority.

E. CATHODIC PROTECTION DEVICES

For all underground crossings, design plans shall include requirements and provisions for cathodic protection devices, and the requirements and provisions for the cathodic protection devices shall be reviewed by the Authority Division Director or designee.