Recommended Practice for Construction Parallel to Existing Underground Transmission Pipelines

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Introduction

Transmission pipelines [1] move large amounts of liquids (petroleum, petroleum products, anhydrous ammonia, or carbon dioxide) and natural gas from producing and/or refining locations to local "outlets," such as bulk storage terminals (for liquids) and natural gas distribution systems. Transmission pipelines are downstream from gathering pipelines (which aggregate gas and liquids from producing areas, for further transmission). Transmission pipelines typically occupy long right of ways. This recommended practice (RP) does not address construction activities in close proximity to distribution systems (which distribute gas through a network of smaller, local pipelines for residential and commercial use).

Outside force damage to underground pipelines and other underground facilities can occur during construction activities, including but not limited to excavation activities. Significant challenges are faced by existing facility owners and operators, line locators, design professionals, one-call center employees, excavators and contractors, and other stakeholders to prevent damage to underground facilities during construction. These challenges are magnified when construction occurs parallel to existing underground facilities. Parallel construction in this environment requires enhanced communication and coordination to avoid excavation damage.

Damage prevention is a shared responsibility.

This RP is intended to address the unique challenges for damage prevention posed by construction of any project parallel to an existing underground hazardous liquid or gas transmission pipeline (a.k.a. "transmission pipelines"), by providing guidance to designers, constructors, operators, and regulators to reduce risks and improve the safety of affected people, property, the environment, and pipelines. Advanced planning, continuous communication, use of one-call systems, accurately locating and marking facilities, safe digging practices, and other tactics are expected to reduce construction related damage.

Representatives from natural gas and liquid petroleum transmission companies, local distribution companies, gathering systems, and the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (U.S. DOT PHMSA), together with respective trade associations (AGA, AOPL, API, and INGAA), have developed this RP. The working group was formed in early 2012. This RP has been developed specifically for the protection of carbon dioxide and energy transmission pipelines operating in the United States, but it may also have use in the protection of other underground facilities. Certain Common Ground Alliance (CGA) *Best Practices* and Pipelines and Informed Planning Alliance (PIPA) RPs may also enhance communications and coordination of construction parallel to existing pipelines. Readers are encouraged to become aware of and implement the respective practices where appropriate. Some of these practices are referenced in this document. This document contains practices in addition to those required or recommended by CGA or PIPA.

This RP is composed of a main body and annexes. The main body of this document contains the general recommendations. The annexes provide additional information and resources.

[1] Transmission pipeline systems can be classified as either "intrastate pipelines," located within one state's borders, or "interstate pipelines" crossing more than one state's borders.

Recommended Practice for Construction Parallel to Existing Underground Transmission Pipelines

1 Scope

Construction activities parallel to existing transmission pipelines, for any distance, are the focus of this recommended practice (RP). Activity of concern includes construction activity that could impact an existing facility, such as excavation or movement of equipment across the pipeline or within the easement that could affect the safe operation of the existing pipeline. This RP is intended as a resource to assist all parties to safely manage construction activities of new or modified facilities parallel to existing underground transmission pipelines.

Legislation and regulation related to excavation damage prevention varies by jurisdiction. For example, damage prevention regulations in Texas are different than in Louisiana. This RP shall not be construed as proposing deviation from any jurisdictional requirements. Likewise, nothing in this RP prevents the parties from agreeing to additional or more stringent measures, regardless of minimum regulatory expectations.

The primary emphasis of these guidelines is on the interaction between existing transmission pipeline operators and those planning to construct in a parallel fashion. These activities may involve many different parties. Contractors working on behalf of the constructing party, including environmental and survey professionals, design engineers, construction contractors, and operators of excavation and earth moving equipment, should engage in work practices that are in conformance with these guidelines, and apply vigilance in identifying unanticipated circumstances that may indicate a problem. This RP refers to all of these entities as the “constructing party.” These guidelines have been developed such that they can be incorporated into contract documents executed with contractors and subcontractors by whichever party is involved in or responsible for construction activities.

2 Normative References

No other document is identified as indispensable or required for the application of this standard.

3 Terms, Definitions, Acronyms, and Abbreviations

3.1 Terms and Definitions

For the purposes of this document, the following definitions apply.

3.1.1
areas
A measured distance from the existing transmission pipeline.

3.1.1.1
active excavation area
An area where the edge of the construction activities (including, but not limited to, excavation) is within 25 ft of the centerline of existing pipeline facilities, unless site-specific conditions require additional clearance.

3.1.1.2
encroachment area [1]
The area where the impact of proposed construction activity is within 50 ft of the centerline of the existing facility, or within the existing pipeline facility’s right-of-way (ROW) or other easement, whichever is greater.

3.1.2
corridor
Strip of land were a proposed facility is to be located.

[1] The definition of “encroachment” applies only to this document and is not a legal definition.