TITLE 16. TRANSPORTATION
CHAPTER 25. UTILITY ACCOMMODATION

CHAPTER AUTHORITY:

N.J.S.A. 27:1A-5, 27:1A-6, 27:7-19, 27:7-44.9, 40:62-35, 40:62-134, 48:2-80 et seq., 48:5A-1, 48:7-1 et seq., 48:7-2 et seq., 48:9-17, 48:9-25.4, 48:13-10, 48:17-8, 48:17-16, and 48:19-17.

Expires on February 1, 2023.

SUBCHAPTER 1. PURPOSE, SCOPE, STANDARDS, AND CONTACT INFORMATION

16:25-1.1 Purpose

This chapter provides the standards and procedures for the location, design, and methods of installing, maintaining, and relocating utilities within State highway right-of-way. This chapter is intended to preserve the integrity and visual quality of the highway; its maintenance and efficiency; to ensure the present and future safety of highway traffic; to promote cooperation among multiple users of the Department's right-of-way; and to ensure that for all utility installations, regardless of the method used, proper controls, compliance with specifications and use of trained personnel shall be used to achieve safe and dependable utility installations. Requirements of this chapter will not be applied retroactively to existing utility facilities until they are adjusted, replaced, or relocated.

16:25-1.2 Scope

(a) All utility facilities approved under highway occupancy permits, pursuant to N.J.A.C. 16:41 or by utility agreements issued pursuant to this chapter, are subject to the requirements of this chapter. Public utilities and cable television companies subject to this chapter are owners of underground, surface, or overhead facilities, either singularly or in combinations. The utilities include, but are not limited to, electric, telephone, sewer, water, gas facilities, and cable services. Requests for permits or agreements by private utilities will be treated as special cases pursuant to N.J.A.C. 16:25-5.1.

(b) Where laws or orders of public authorities, industry, government codes, or highway authorities prescribe a higher degree of protection than provided by this chapter, then the higher degree of protection shall prevail.

16:25-1.3 Standards

(a) Utility design and construction are subject to minimum safety standards and construction requirements prescribed by national or industry standard codes.

(b) In the absence of applicable national, State, or local regulatory agency standard codes, the industry standard code shall apply.

(c) The minimum applicable standards set forth in the Department's Design Standards shall apply in all instances where any such applicable highway specifications are more restrictive or require greater safety factors or higher standards of construction, materials, or workmanship than the applicable national or industry standard code. The Design Standards, which are incorporated herein by reference, as amended and supplemented, are as follows:

1. The New Jersey Department of Transportation Roadway Design Manual, 2008 edition, available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at: www.nj.gov/transportation/eng/documents/RDM/;

2. The New Jersey Department of Transportation Bridges and Structures Design Manual, 5th edition, available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at: www.nj.gov/transportation/eng/documents/BSDM/;

3. The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition, available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at: www.nj.gov/transportation/eng/;

4. The New Jersey Department of Transportation Sample Plans, 2007, available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at: www.nj.gov/ transportation/eng/;

5. The New Jersey Department of Transportation Standard Roadway Construction/Traffic Control/Bridge Construction Details, 2007, available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at: www.nj.gov/transportation/eng/;

6. The New Jersey Department of Transportation Standard Electrical Details, 2007 edition, available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at: www.nj.gov/transportation/eng/elec/; and

7. The New Jersey Department of Transportation's Soil Erosion and Sediment Control Standards 2008 edition, as required under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., available from the Department's Engineering Documents Unit at 609-530-5587 or on the Department's website at www.nj.gov/transportation/eng/ documents/SESC/.

(d) Additional governmental and industry standards that are applicable, which are incorporated herein by reference, as amended and supplemented, are as follows:

1. A Policy on Geometric Design of Highways and Streets, 6th edition, available from the American Association of State Highway and Transportation Officials (AASH-

TO), Suite 249, 444 North Capitol St., NW, Washington, DC 20001, or on the AASHTO website at: https://bookstore.transportation.org;

2. A Guide for Accommodating Utilities Within Highway Right-of-Way, 4th Edition, available from AASHTO, Suite 249, 444 North Capital St., NH, Washington, DC, 20001, or on the AASHTO website at: https://bookstore.transportation.org;

3. A Policy on Design Standards--Interstate System, 2005 edition, available from the American Association of State Highway and Transportation Officials (AASHTO), Suite 249, 444 North Capitol St., NW, Washington, DC 20001, or on the AASHTO web-site at: https://bookstore.transportation.org;

4. Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2009 edition. The MUTCD is available on the Federal Highway Administration website at: http://mutcd.fhwa.dot.gov/ or on the AASHTO website at: https://bookstore.transportation.org/;

5. Roadside Design Guide, 4th edition, available from the American Association of State Highway and Transportation Officials (AASHTO), Suite 249, 444 North Capitol St., NW, Washington, DC 20001, or on the AASHTO website at: https://bookstore.transportation.org/;

6. The National Electrical Safety Code (NESC), 2007 edition, available from IEEE Publications Office, 10662 Los Vaqueros Circle, P.O. Box 3014, Los Alamitos, CA 90720-1264, or on the IEEE website at: http://standards.ieee.org/nesc/nescproducts.html;

7. API RP 1102, Recommended Practice for Steel Pipelines Crossing Railroads and Highways, 7th Edition, 2007, available from the American Petroleum Institute (API), 1220 L Street, NW, Washington, DC 20005-4070, or on the API website at: http://api-ec.api.org/Publications/;

8. American Water Works Association Standards, in effect as of the date of the standard is applied, available from the American Water Works Association 6666 W. Quincy Avenue, Denver, CO 80235, or on the AWWA website at: http://apps.awwa.org/EbusMain/

9. The ANSI Standard Code for Pressure Piping, in effect as of the date the stand-ard is applied, available from the American National Standards Institute (ANSI), ANSI Customer Service Department, 25 West 43rd Street, 4th Floor, New York, NY, 10036, or on the ANSI website at: www.webstore.ansi.org/; and

10. ANSI Standard Codes for Fiber-Optic Facilities, in effect as of the date the standard is applied, available from the American National Standards Institute (ANSI), ANSI Customer Service Department, 25 West 43rd Street, 4th Floor, New York, NY, 10036, or on the ANSI website at: www.webstore.ansi.org/.

16:25-1.4 Contact information

All submissions shall be sent to the following address as required:

Office of Utility Management

New Jersey Department of Transportation
PO Box 600
E&O Bldg., 7th Floor
Trenton, NJ 08625
(609) 530-5367

or

Operations Permit Office
New Jersey Department of Transportation
PO Box 600
E&O Bldg., 4th Floor
Trenton, NJ 08625
(732) 625-4330

SUBCHAPTER 2. DEFINITIONS

16:25-2.1 Definitions

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise:

"Adjustment" means the alteration or relocation of utility facilities to accommodate the construction of highway improvement projects.

"Arterial highway" means a highway primarily for through traffic, usually a continuous route.

"As-built plans" means drawings showing the actual locations of installed or relocated utilities.

"Backfill" means the replacement of suitable material around and over a pipe, conduit system, or direct buried cable.

"Bedding" means the soil or other suitable material to support a pipe, conduit system, or direct buried cable.

"Border area" means the space between the outer edge of a shoulder, curb line, or gutter line and the right-of-way line.

"Boring" means a method for installing pipes underground without disturbing the surface using an auger to penetrate the ground and remove soil, while jacking a pipe just behind the cutting head.

"Bury" means the depth as measured from the top of a pipe, conduit system, or direct buried cable to the grade of a roadway or roadside.

"Cable television company" or "CATV company" means any person or group of persons who provides cable service over a cable system and directly or through one or more affiliates owns a significant interest in such cable system; or who otherwise controls or is responsible for, through any arrangement, the management and operation of such a cable system.

"Cap" means the rigid structural element covering a pipe or conduit system.

"Carrier" means a pipe directly enclosing a transmitted fluid (liquid or gas), including service lines.

"Casing" or "encasement" means a structural element surrounding a carrier or conduit.

"Clear zone area" means that roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles.

"Coating" means the material applied to, or wrapped around, a pipe.

"Commissioner" means the Commissioner of the New Jersey Department of Transportation, or such other person as the Commissioner may designate, when legally permissible.

"Conduit" or "duct" means an enclosed tubular runway for protecting wires or cables.

"Control of access" means the condition where the right of owners or occupants of abutting land or other persons to access, light, air, or view in connection with a highway is controlled by the Department to give preference to through traffic either:

1. Fully, with access connections at selected public roads and with prohibited crossings at grade and prohibited direct driveway connections; or

2. Partially, with some crossings at grade and some driveway connections in addition to access connections at selected public roads.

"Curb line" means the edge of the paved surface of the roadway where it meets a raised curb.

"Department" means the New Jersey Department of Transportation.

"Drain" means an appurtenance to discharge liquid seepage from casings.

"Driving" means a method for installing pipes underground without disturbing the surface by using a small pipe with a pilot shoe that can be driven through compressible soils by steady thrusting, hammering, or vibrating.

"Facility" or "facilities" means all plant and equipment owned or operated by a utility.

"Federal-Aid roads" means roads that are included on the Federal-Aid Road System and eligible for Federal funds, either as part of the National Highway System or the FHWA Surface Transportation Program. Federal-Aid roads are, collectively: all primary arterials, all minor arterials, all urban collectors, and all rural major collectors.

"Fiber optic cable" means a communication cable utilizing hair-thin strands of ultra-pure glass, plastic, or other transparent material that can carry high volumes of information via lightwave signals.

"Fiber optic duct bank" means a conduit or duct to be exclusively occupied by fiber optic cable.

"Frontage road" means a local street or road auxiliary to and located on the side of an arterial highway for service to abutting property and adjacent areas and for control of access.

"Grounded" means connected to the earth or to some extended conducting body that serves as a conductor to earth whether the connection is intentional or accidental.

"Grout" means a cement mortar or a slurry of fine sand or clay.

"Handhole" means a small chamber, which:

1. Provides access to a splice enclosure;

2. Is placed periodically along a conduit to provide smooth safe cable installation; or

3. Stores excess cable for maintenance purposes.

"High pressure" means a gas or liquid petroleum pipeline that operates, or may reasonably be expected to operate in the future over 60 psig pressure.

"Highway," "street," or "road" means a public way owned or under the jurisdiction of the Department, including the entire area within the right-of-way, for purposes of travel.

"Highway occupancy permit" or "permit" means a permit, approved by the Commissioner, issued for any construction, major maintenance, or relocation work by utilities on right-of-way or property under the jurisdiction of the Department pursuant to N.J.A.C. 16:41.

"Horizontal Directional Drilling" or "HDD" means a steerable trenchless method of installing underground pipes, conduits, and cables in a shallow arc along a prescribed bore path by using a surface launched drilling rig, with minimal impact on the surrounding area.

"Interchange" means a system of interconnecting roadways in conjunction with one or more grade separations, providing for the movement of traffic between two or more roadways.

"Intersection" means the area where two or more highways join or cross, including the roadway and roadside facilities for traffic movements within the area.

"Jacking" means a method for installing pipes underground without disturbing the surface by pushing a pipe horizontally by mechanical means without boring.

"Limited access highway" means a State highway, especially designed for through traffic, over which abutting lot owners have no right to access the highway.

"Local public agency" means a county, municipal, or city government agency.

"Manhole" means an opening in an underground system providing access to utility facilities for the purpose of making installations, inspections, repairs, connections, and tests. The term includes chambers or vaults.

"Mechanically stabilized earth walls" or "MSE" means retaining walls consisting of horizontal soil reinforcing elements and a facing to prevent erosion.

"Median" means the portion of a divided highway separating the traveled ways for traffic moving in opposite directions.

"Non-wooden pole" means a pole made of materials including, but not limited to, the following: steel, concrete, fiberglass, and glue-laminated wood.

"Pavement structure" means the combination of subbase, base course, and the surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

"Pipe" or "pipeline" means a formed hollow cylinder used for the conveyance of liquids or gases. Cylinders fabricated from plate are not a pipe.

"Pressure" means the relative internal pressure in psig (pounds per square inch gauge).

"Private utility" means any utility that is not within the general jurisdiction, supervision, and control of or otherwise regulated by the Board of Public Utilities or a utility owned and operated by private citizens or concerns that is not otherwise identified or regulated by the Board of Public Utilities.

"Public utility" means an entity as defined in N.J.S.A. 48:2-13.a, including cable television as regulated under N.J.S.A. 48:5A-1 et seq. A public, private, or cooperatively owned company that enters into a contract with a public utility shall not be considered a public utility on the basis of that contract.

"Right-of-way" means State highway property and property rights, including easements, owned and controlled by the Department.

"Roadside" means the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

"Roadway" means the portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.

"Scenic overlook" means a roadside area provided for motorists to stop their vehicle beyond the shoulder, primarily for viewing the scenery in safety.

"Single wooden pole type of construction" means a type of construction where no wooden pole shall be closer than 10 feet to any other wooden or non-wooden pole.

"Sleeve" means a short casing through a pier or abutment of a highway structure, wall, etc.

"Subgrade" means all underlying soils beneath the pavement structure.

"Surfaced area" means the area that has been covered with manmade materials to provide a firm surface upon which to walk or drive.

"Transmission facilities" means high voltage electric lines, wire or cable (including supporting structures) and appurtenant facilities (usually with a rating of 69 kilovolts or above) that transmit energy from one generating plant to electric substations or switching stations.

"Transmittant" means gasses or liquids distributed through a system of pipes.

"Traveled way" means the portion of the roadway for the movement of vehicles, exclusive of shoulders, auxiliary lanes, and bicycle lanes.

"Trenched" means installed in an open excavation.

"Trenchless" means installed without breaking the ground or pavement surface, except at the entrance and exit point, such as by jacking, boring, horizontal directional drilling, coring, plowing, pipe ramming, pipe bursting, or micro-tunneling.

"Utility" means a privately, publicly, or cooperatively owned facility for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, that directly or indirectly serves the public. The term "utility" shall also mean the utility owner or the utility company inclusive of any wholly owned or controlled subsidiary. The term "utility" or "utilities" when used in this chapter is intended to reference both public and private utilities unless otherwise individually specified.

"Utility agreement" means the document by which the Department enters into an agreement with a public utility, a private utility, a cable television company, a utility not covered by N.J.S.A. Title 48, or a utility having compensable property rights for the installation, removal, and/or relocation of its facilities. The utility agreement further serves as the permit to occupy the highway right-of-way and specifies the requirements for, and the conditions of, said occupancy.

"Vent" means an appurtenance by which fluids or gases between a carrier pipe and a casing may be inspected, samples exhausted, or evacuated usually through risers or standpipes projecting above the ground surface.

"Waiver" means the Department's intentional relinquishment of its rights to wholly enforce provisions of this chapter. Waivers may reduce, modify, or eliminate requirements.

"Wooden pole" means the stem of a tree which has the proper natural characteristics to meet the engineering and design standards to support a utility line; and has been harvested, shaped, treated, and certified to meet that need.

SUBCHAPTER 3. HIGHWAY OCCUPANCY PERMITS

16:25-3.1 General requirements

(a) Any construction, major maintenance, or relocation work by utilities and cable television companies on right-of-way or property under the jurisdiction of the Department requires either a highway occupancy permit pursuant to N.J.A.C. 16:41 or a utility agreement, as described at N.J.A.C. 16:25-4.1, entered into with the Department for adjustments and relocations required for highway projects.

(b) All other permits obtained by the utility or cable television company for utility facility installation and related work, whether from the Department or other parties shall be supplied to the Department prior to issuance of any agreement or highway occupancy permit.

(c) Costs incurred by the Department for inspection of the installation and repair, or relocation of the facilities owned by a public utility or cable television company during construction, not resulting from a Department-administered project, shall be reimbursed to the Department by the public utility or cable television company. Department costs, as estimated by the Department, shall be remitted to the Department by the public utility or cable television company in accordance with any agreement or permit. Final costs, even if the costs exceed the estimate, shall be remitted to the Department within 30 days of invoicing for same.

(d) A public utility or cable television company that is granted a highway occupancy permit for occupation of State right-of-way shall not sell, lease, or otherwise transfer any rights of the permit to another public utility, cable television company, or anyone else, unless such a transfer is approved by the Department.

(e) Public utilities and cable television companies shall be prohibited from spraying, cutting, or trimming of trees without an agreement or permit issued by the Department pursuant to N.J.A.C. 16:41. Emergency removal of trees or tree branches that have fallen on a utility facility or equipment resulting in a safety risk to the public shall follow provisions of N.J.A.C. 16:41-6.1(d).

(f) In accordance with N.J.A.C. 16:41, removal of trees or shrubbery acting as a buffer for the adjacent property is not permitted without the Department's approval. However, if removal of vegetation is necessary, replacement trees and shrubs shall be provided by the utility as required by the Department.

SUBCHAPTER 4. REIMBURSEMENT FOR UTILITY RELOCATIONS, ADJUSTMENTS, AND REMOVAL

16:25-4.1 Reimbursement

(a) Public utility and cable television companies are entitled to reimbursement for the costs and expenses for the adjustment, relocation, and removal of their facilities as provided in N.J.S.A. 27:7-44.9.a. The Department will make contractual arrangements, through a utility agreement, to reimburse the utility companies and cable television companies for eligible adjustments in connection with the construction, reconstruction, maintenance, or operations of any highway project administered by the Department.

(b) The Department will reimburse the utility for costs incurred to acquire right-of-way or easement rights for the purpose of utility relocations in accordance with the provisions of the Eminent Domain Act of 1971, N.J.S.A. 20:3-1 et seq.

(c) In accordance with the procedures set forth in 23 CFR Part 645, Subpart A, the Department will reimburse the utility for the costs incurred for relocations related to Federally-funded projects.

(d) Reimbursement for relocation of transmission facilities will be limited to transmission facilities that are the same type and configuration, per current minimum standards, which are located within either existing Department right-of-way or right-of-way required to accommodate future Department projects.

(e) In accordance with Department procedures, invoices submitted to the Department for authorized utility reimbursement expenses shall be prepared in a format that clearly identifies the utility agreement number, a detailed breakdown of work performed, and costs incurred against the utility agreement.

(f) The utility shall not be reimbursed for verifying that their facility is within the State's right-of-way or within the limits of a proposed Department project.

(g) The utility shall not be reimbursed for providing the Department or its consultants, information on all tenants jointly occupying their utility facility.

SUBCHAPTER 5. SPECIAL PERMITS AND AGREEMENTS

16:25-5.1 Private utilities

(a) Requests for permits or agreements by private persons or concerns to cross, occupy, or use highways or Federal-Aid Road right-of-way shall be treated as special cases. The review, approval, and issuance of any such permits or agreements for the accommodation of such privately-owned facilities will be on the merits of the individual requests as to their necessity and legal basis consistent with New Jersey law.

(b) Where the requested use and occupancy involves more than a road crossing of up to 1/8 mile, or where equivalent utility service is available without the private line installation, then the request will be reviewed for legal propriety of the requested use. All such private lines shall also meet all other applicable provisions of this chapter.

(c) Applications for longitudinal use and occupancy of Federal-Aid roads by private utilities will be submitted by the Department to the Federal Highway Administration Division Administrator for prior approval.

16:25-5.2 Highway lighting

Requests by electric utilities or municipalities to install or revamp highway lighting systems that affect highways under the Department's jurisdiction, will be treated as special cases and shall require highway occupancy permits pursuant to N.J.A.C. 16:41. Each request shall be submitted to the Department for review and recommendations as to acceptability of design, adequacy of lighting, and safety factors, in addition to the review and processing for permit approval of an above-ground utility installation in accordance with N.J.A.C. 16:41.

16:25-5.3 Local Federal-Aid Road agreements

Pursuant to 23 CFR Part 645, Subpart B, the Department will enter into necessary agreements with the appropriate local public agency to regulate the use and occupancy of Federal-Aid Roads, and to assist local officials in establishing utility accommodation policies conforming, as appropriate for the type of highway involved, to the provisions of this chapter.

16:25-5.4 Location of utility facilities within State- or Department-owned railroad right-of-way

(a) Requests for permits or agreements to cross, occupy, or use State- or Department-owned railroad right-of-way will be treated as special cases. The review, approval, and issuance of any such permits or agreements for the accommodation of such facilities will be based on the merits of the requests as to its necessity and location.

(b) All installation of underground facilities shall be trenchless unless otherwise approved by the Department.

(c) When applicable, additional agreements or conditions may be required from the appropriate party that has operating rights over the railroad right-of-way or is responsible for the maintenance of such right-of-way.

16:25-5.5 Railroad crossings

(a) The Commissioner has plenary power over all public railroad crossings in the State of New Jersey, in accordance with N.J.S.A. 48:12-49 et seq.

(b) Railroad crossings consist of grade-separated crossings (bridged) and at-grade crossings:

1. The following applies to grade-separated crossings:

i. Where the railroad is over the highway, the Department will determine the vertical and horizontal under clearances and the railroad and the Department shall approve the structure of the crossing;

ii. Where the railroad is under the highway, the railroad shall determine the vertical and horizontal under clearances and the Department and the railroad shall approve the structure of the crossing.

2. The following applies to at-grade crossings:

i. Public at-grade crossings occur where the railroad intersects an existing or proposed public street or highway. New public at-grade crossings or modifications to existing public at-grade crossings are only permitted by the Commissioner after the evaluation, public information, and response processes delineated in (c) below are completed.

ii. Private at-grade crossings occur at locations other than public thoroughfares, and the Commissioner does not exercise his or her authority over these crossings; however, where a private at-grade crossing is used primarily by the general public, the Commissioner may take jurisdiction of the private at-grade crossing, if he or she is of the opinion such jurisdiction is in the interest of public safety.

(c) The evaluation, public information, and response process for at-grade public crossings shall be conducted by the Department as follows:

1. A diagnostic team, composed of Department staff, the applicant for the crossing, and municipal and county officials who have an interest in the crossing, will meet on

the site of the proposed crossing or at another convenient location to evaluate the engineering and safety aspects of the crossing;

2. The team leader (a Department staff member) will prepare a memorandum of record, noting the findings of the team;

3. The Department will publish a notice in the newspaper(s) serving the area in which the proposed grade crossing is located, describing the particular work intended at the grade crossing, and calling for members of the public who have opinions, or who have questions or comments regarding the proposed crossing to submit their opinions, questions, or comments to the Department;

4. The Department will respond to commenters in writing;

5. The Department will issue a decision based on the diagnostic team's recommendations and taking into account the comments received; and

6. Any applicant who objects to the Department's decision regarding an at-grade crossing may request a hearing in accordance with the provisions of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and 52:14F-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1.

SUBCHAPTER 6. SCENIC CONSIDERATIONS

16:25-6.1 General considerations

The type and size of utility facilities and the manner and extent to which they are permitted along or within highway right-of-way can materially alter the scenic quality, appearance, and view of highway roadsides and adjacent areas. The Department will identify scenic areas to utilities during the utility permit and agreement processes. Such areas include, but are not limited to, scenic strips, scenic overlooks, rest areas, recreation areas, designated State or Federal scenic byways, and the right-of-way of sections of highways which pass through parks, recreation areas, wildlife and waterfowl refugees, historic sites, and scenic corridors as designated by the Department.

16:25-6.2 Underground utility installations

Underground utility installations in scenic areas shall avoid extensive removal or alterations of trees or other natural features and avoid impacts to visual quality to the extent practicable.

16:25-6.3 Aerial utility installations

The Department may restrict aerial utility installations in scenic areas. Waivers may be granted or restrictions may be applied when alternative locations, including underground placement, are unusually difficult to build, unreasonably costly, or cause greater visual impacts.

SUBCHAPTER 7. FACILITY DESIGN AND LOCATION

16:25-7.1 Design

(a) On new installations or adjustments of existing utility lines, provision shall be made for known or planned expansion of the utility facilities, particularly those located underground or attached to bridges. The utility lines shall be planned so as to minimize hazards and interference with highway traffic.

(b) All utility installations on, over, or under highway rights-of-way and attachments to highway structures shall be of durable materials designed for long service life expectancy and relatively free from routine servicing and maintenance. All materials shall meet or exceed the applicable current industry standards.

(c) Above ground utility facilities shall be of a design compatible with the visual quality of the specific highway section being traversed.

16:25-7.2 Location

(a) The location of utility facilities shall permit the servicing of the facilities with minimum interference to highway traffic and avoid the need to relocate the facilities to accommodate planned highway improvements.

(b) Longitudinal installations shall be located on uniform alignment as near as practicable to the right-of-way line to provide a safe environment for traffic operation and preserve space for future highway improvements or other utility installations.

(c) The utility shall prepare as-built plans based on the New Jersey Plane Coordinate system, or such other format as found acceptable by the Department, with offsets shown from existing physical features. The plans shall record the vertical and horizontal location of the utility facility, and clearly indicate changes in horizontal and vertical alignments. The as-built plans shall also show the horizontal and vertical locations of all manholes or handholes. The utility shall submit four prints and one reproducible copy of the as-built plans, including a digital pdf file copy, within one month of completion of construction. The submission shall be made to the Department's Utility Coordination Unit. The utility shall maintain the original as-built plans, including an electronic copy, for future reference.

(d) No underground facility shall be permitted within the highway right-of-way unless the utility subscribes to the "One-Call Damage Prevention System." Requirements for One-Call notification and Department-owned fiber optic markouts are as follows:

1. The utility company shall supply the confirmation number obtained from the One-Call Damage Prevention System to the Operations Permit Office in accordance with N.J.S.A. 48:2-83. The utility shall provide this confirmation number at least 72 hours before starting the activity.

2. The utility shall conduct a field evaluation, which includes a review of the Department's Intelligent Transportation System inventory database at: http://www.state.nj.us/transportation/eng/elec/ITS/requests.shtm to determine if any fiber optic cable or conduit facilities are present. The utility shall request a mark-out of Department facilities not less than three business days nor more than 10 business

days prior to conducting any work activity, using the instructions for request found on the website.

(e) The utility shall construct underground facilities that are detectable by standard locating equipment operated on the surface. All non-metallic underground lines shall be accompanied by a trace wire, metallic tape, or other method to effectively locate and mark the underground lines. When feasible, such features shall be incorporated into the utility line.

16:25-7.3 Safety, construction, and highway restoration provisions

(a) The area disturbed by utility installations or relocations shall be kept to a minimum. Restoration methods shall be in accordance with the Department's standards, specifications, and applicable special provisions in highway occupancy permits for utilities and in utility agreements for highway projects.

(b) Disturbance to the Department's existing electrical facilities, ITS facilities, and drainage facilities shall be avoided. Where necessary, underdrains shall be provided to prevent entrapped water, particularly where utility trench backfill consists of controlled low strength material concrete encasement.

(c) Underground utility facilities shall be backfilled with material required by Department standard specifications. Jetting or puddling shall not be permitted under the roadway.

(d) Material or equipment shall not be stored on Department property except during working operations, unless approved by the Department. Material or equipment shall not be stored within the clear zone area without proper protection.

(e) The utility shall restore all portions of the work area to accommodate traffic and pedestrians at the end of the work day. The pavement surface shall be restored to a smooth and sound condition which shall meet or exceed the conditions prior to construction. The surface shall be maintained in this type of condition on a 24-hour, seven days a week basis during the duration of the work until Department acceptance. If settlement or erosion occurs, the utility shall restore the area within a period of time approved by the Department. The utility shall provide the Department with a list of emergency contacts should the Department need to contact the utility to arrange for such maintenance.

(f) Restoration of flexible and composite pavement by the utility company shall be in accordance with the Department's standard details for Utility Trench Restoration found in the New Jersey Department of Transportation Standard Roadway Construction/Traffic Control/Bridge Construction Details.

(g) The utility shall be responsible for maintaining the uninterrupted flow of traffic at all times, unless otherwise specified in the permit or agreement or incorporated as part of the traffic control documents for a Department construction project.

(h) All work performed within highway right-of-way and property under the jurisdiction of the Department, and all signs, markings, or other traffic control devices used by the utility shall be in compliance with the standards set forth in N.J.A.C. 16:25-1.3. A traffic control plan shall be developed and approved for all utility work

within highway right-of-way in accordance with conditions contained in highway occupancy permits issued pursuant to N.J.A.C. 16:41. Utility work that is part of a Department construction project, including advance utility relocation work, shall have a traffic control plan prepared and approved in accordance with the utility agreement between the Department and the utility.

(i) Permission from the appropriate Departmental Operations Permit Office and Traffic Operations Center shall be obtained before conducting any scheduled utility activity affecting traffic. On Department construction projects, all utility construction activity shall be coordinated with the Department's Resident Engineer.

(j) Utility facilities within highways shall be constructed and maintained to withstand traffic loading.

(k) All utility facilities within the border area shall be constructed and maintained to withstand Department maintenance vehicular loads.

(*l*) Utility facilities shall be kept in a state of good repair both structurally and aesthetically at all times.

SUBCHAPTER 8. PIPELINES

16:25-8.1 Installation standards

(a) Pipelines shall be installed and tested in accordance with the minimum Federal safety standards of the US Department of Transportation as published in 49 CFR Part 192 or 195, as applicable, and any amendments thereof and other applicable Federal and State of New Jersey rules or regulations.

(b) The installation or replacement of pipelines along or crossing existing highways shall be in accordance with Department plans and specifications or Department-issued permits. The safety of traffic and preservation of the earth structure supporting the pavement may require restriction of construction methods. Such conditions of installation, if any, will be specified by the Department.

(c) The following precautionary measures are required for pipeline installations:

1. Pipeline installation permits and utility agreements will identify the transmittant, the maximum working, test, or design pressures, and the design standards for the carrier.

2. When it is anticipated that there will be a change in the transmittant or an increase in the maximum design pressure specified in the permit, the utility shall obtain Department approval through the Operations Permit Office. The request shall specify the applicable codes to be used for the transmittant.

16:25-8.2 Location and alignment

(a) For all locations and alignments of new and relocated pipelines, an appropriately detailed evaluation shall be conducted by the utility, or the Department in consultation with the utility, to establish the presence, three dimensional location, and condition of existing underground utilities. Aged infrastructure, which may require

special protection from damage, shall be identified. For pipeline relocations, plans for near-term improvements or expansion of services by utilities shall also be identified.

(b) Crossings shall be located as near perpendicular to the highway alignment as practical.

(c) Conditions unsuitable or undesirable for a pipeline crossing a highway shall be avoided. These include, but are not limited to:

1. In deep cuts;

2. Near footings of bridges and retaining walls;

3. Across intersections at grade or ramp terminals;

4. At cross drains and culverts;

5. Within a watershed area drained by a pump, if the pipeline carries a liquid or a liquefied gas;

6. In wet or rocky terrain where it would be difficult to attain minimum bury depth; and

7. Within the limits of Mechanically Stabilized Earth (MSE) walls.

(d) On longitudinal installations, utility locations parallel to the pavement at, or adjacent to, the right-of-way line are preferable to minimize interference with highway drainage, the structural integrity of the traveled way, shoulders, embankments, and the safe operation of the highway. The lateral location shall be offset a suitable distance beyond the slope, ditch, or curb line. Longitudinal placement within the roadway shall be avoided by utilities. When installation of utility facilities in the roadway is unavoidable, due to right-of-way or environmental constraints, lack of sufficient border area, or other significant restriction, the utility may be allowed in the roadway upon verification that there is no alternative to locating the facility in the roadway. Location of utilities in the roadway shall take into consideration existing and future drainage pipe and structures and the installation of future utility facilities and the efficient maintenance of existing infrastructure.

(e) Vertical and horizontal clearance between a pipeline and a highway structure or other highway or utility facilities shall be sufficient to permit maintenance of the pipeline and the other facilities.

(f) The minimum lateral proximity to a parallel utility facility, including the State's fiber optic ducts, shall be 18 inches from the edge of utility facility to the edge of utility facility. Electric power and communication cables, gas lines, water lines, and sewer lines shall be separated from one another as required by appropriate industry codes. Separation of the utility from highway facilities or other utilities shall allow for reasonable success in locating utilities with electronic devices.

(g) Placement of new utility manholes, handholes, and valve covers within the roadway shall be avoided. When installation of utility facilities in the roadway is unavoidable due to right-of-way or environmental constraints, lack of sufficient border area, or other significant restriction, the utility may be allowed in the roadway upon verification that there is no alternative to locating the facility in the roadway. The util-

ity shall construct manholes or handholes, so that the longest dimension is parallel to the roadway.

(h) When adjustment of existing facilities in the roadway is unavoidable, they shall not be located within a vehicular wheel path.

(i) Placement of pipelines shall avoid areas where damage from installation or replacement of guide rail, sign supports, or any other ground penetrating infrastructure is likely to occur.

(j) Installation of utilities within the limits of MSE walls shall not be permitted.

(k) The age and type of material of adjacent utility infrastructure shall be considered in determining the offset distances and methods of installation.

16:25-8.3 Bury

(a) The low point(s) in the highway cross-section controls the depth that pipeline crossings shall be buried and that depth is typically the bottom of any longitudinal ditch.

(b) The minimum bury depth shall be 36 inches. Where minimum bury depth cannot be achieved due to the presence of other utilities, drainage structures, water table, or similar constraints, the pipe shall be rerouted or otherwise protected in a suitable manner in accordance with industry and utility company standards and approved by the Department. In such instances, the utility should consider increasing wall thickness or encasing the utility, taking into account the relative risk with respect to the product carried and engineering safety factors.

(c) In establishing the bury depth below an unpaved ditch, consideration should be given to potential increases in ditch depth resulting from scour, ditch maintenance operations, or the current or future need to increase the capacity of the ditch.

(d) On longitudinal installations, the critical controls for bury are the depths of lateral drainage facilities, landscaping, other buried utility lines, bridge structures, and highway maintenance operations.

(e) The bury depth shall be sufficient so that the liquid transmitted will not freeze or otherwise be restricted from flowing. In addition, the depth shall be sufficient to withstand the increased impact loads transmitted through the frozen soil.

(f) At no time shall the bury depth for pipelines carrying transmittants that are flammable, corrosive, expansive, energized, or unstable, particularly if carried at high pressure or potential, be less than acceptable industry and utility company safety limits.

(g) To protect the integrity of the roadway, the bury depth of pipelines installed by trenchless methodology is dependent on pipeline size, material, transmittant carried, and method of construction. Bury depth is established on a case-by-case basis, in consultation with the utility.

16:25-8.4 Trenched construction and backfill

(a) Trenched construction, bedding, and backfill shall conform to the Department's standard specifications and construction details set forth in N.J.A.C. 16:25-1.3 and provisions of N.J.A.C. 16:25-7.3.

(b) Except for emergency repairs, no utility cuts shall be permitted in newly constructed pavement or overlay for five years without the consent of the Commissioner as documented in a waiver pursuant to N.J.A.C. 16:25-13 and 16:41-8.1. If utility cuts are required for emergency repairs, the utility company shall mill and resurface the section of the roadway to the standards established by the Department.

16:25-8.5 Trenchless construction

(a) Acceptable techniques for installing pipelines under a highway without disturbing the surface are subject to specific site conditions and include, but are not limited to, driving, jacking, boring, horizontal directional drilling, coring, and micro-tunneling.

(b) The design and trenchless construction of pipeline crossings under highways shall include the following:

1. The trenchless construction shall extend a suitable distance beyond the slope or ditch lines. Where appropriate, the trenchless construction shall extend to the access control lines, to the outside of frontage roads, or to an indicated line that allows for future widening of the highway without the need for any utility adjustment;

2. The portal limits of the pipeline crossings shall be located beyond the surfaced areas of the highway to avoid impairing the roadway during pipeline installation;

3. The Department will establish, on a case-by-case basis, the need to grout the voids outside the carrier.

(c) When trenchless installation is proposed by the utility, the utility shall furnish the Department with information regarding the construction methods, controls, and monitoring to be used.

16:25-8.6 Casing requirements

(a) Encasement is required for all utility facility crossings directly under State highways unless a waiver is approved by the Department pursuant to N.J.A.C. 16:25-13.2.

(b) Casings shall also be used for, but not limited to, the following conditions:

1. As an expediency for the insertion, removal, replacement, or maintenance of carrier pipe crossings of highways and at other locations where it is necessary to avoid open trenched construction;

2. When protection for carrier pipes from external loads or shock, either during or after construction of the highway is required;

3. When a means of conveying leaking fluids or gases away from the area directly beneath the traveled way to a point of venting at or near the right-of-way line or to a point of drainage in the highway ditch or a natural drainage way is required;

4. When protection of coated carrier pipes is required;

5. When less than minimum bury depth is unavoidable;

6. Near footings of bridges or other highway structures or across unstable or subsiding ground;

7. Near other locations where there may be a hazard; and

8. On structures that cross environmentally sensitive streams, riparian areas, wetlands, protected species habitat or other protected environmental features.

(c) Casings shall be designed in accordance with the following requirements:

1. To support the load of the highway and superimposed loads thereon, and at a minimum, the casing shall equal the structural requirements for highway drainage facilities;

2. Be composed of material of satisfactory durability for the conditions to which they may be exposed;

3. Extend a suitable distance beyond the slope or ditch lines. Where appropriate, extend the casing to the access control lines, to the outside of frontage roads, to outside the outer curbs on curbed highways or to an indicated line that allows for future widening of the highway without the need for any utility adjustment;

4. The casing ends sealed with a flexible material to prevent flowing water and debris from entering the annular space between the casing and the carrier. All necessary appurtenances shall be included; and

5. If required by engineering practice or industry standards, provided with cathodic protection anti-corrosion systems. The carrier and casing pipes shall be effectively insulated from each other, cathodically protected as a unit, or provided with alternative protection.

(d) The carrier pipe for approved uncased pipeline installations shall conform to the most current applicable material and design requirements of utility industry and governmental codes and specifications and be designed to support the load of the highway plus the superimposed loads thereon when the pipe is operated under all ranges of pressure from maximum internal to zero pressure.

(e) Required additional mechanical protection to an approved uncased pipeline crossing a highway is as follows:

1. Uncased carrier pipelines shall require a higher factor of safety in the location, design, construction, and testing, including such features as increased depth of cover, thicker wall pipe, radiograph testing of welds, hydrostatic testing, coating and wrapping, and cathodic protection.

2. Uncased crossings of welded steel pipelines that carry flammable, corrosive, expansive, energized, or unstable materials may be permitted, provided additional protective measures are taken.

(f) For Department projects, if it has been determined that both cased and uncased utility crossing alternatives are technically acceptable, the most economical alternative shall be considered. If the utility elects to advance a betterment or a more costly alternative, the utility is responsible for the cost differential.

16:25-8.7 Appurtenances

(a) The following shall apply for appurtenances to pipeline installations including, but not limited to, vents, drains, markers, manholes, and shut-offs:

1. Vent standpipes shall be located and constructed so as not to interfere with the maintenance of the highway or be concealed by vegetation. Vents should stand as close as possible to the right-of-way line and should not affect pedestrian traffic.

2. Drains shall not discharge into roadside ditches or natural watercourses.

3. Readily identifiable and suitable markers shall be placed on the right-of-way line where it is crossed by pipelines carrying transmittants that are flammable, corrosive, expansive, energized, or unstable, particularly if carried at high pressure or potential, except where a vent will serve as a marker. Markers are also required for longitudinal pipeline installations and shall be spaced at a distance which allows visibility between adjacent markers.

4. Manholes shall be designed and located in such a manner that will cause the least interference to other utilities and future highway expansion. New manholes shall not be located in the pavement of highways.

5. Shut-off valves, preferably automatic, shall be installed in lines at or near the ends of structures and near hazards, unless hazardous segments can be isolated by other sectionalizing devices within a reasonable distance.

16:25-8.8 Utility tunnels

(a) The Department may require that a utility tunnel be constructed for a pipeline crossing a highway when it can be foreseen that several utility crossings will be needed, or the cost of the tunnel (either a large casing, box culvert, or three-sided culvert) may be less expensive than the alternate of several trenchless or separately encased pipelines. The utilities shall consider the need for future crossings and the convergence of their facilities to a joint-use single crossing.

(b) In a utility tunnel that will serve multiple utilities, provision shall be made to isolate mutually hazardous transmittants, such as fuels and electric energy, by compartmentalization or by auxiliary encasement of incompatible carriers. The utility tunnel structure shall conform to the Department's culvert and bridge standards.

16:25-8.9 Adjustment of existing pipelines

(a) The following shall be applied to determine when existing pipelines need adjustment to accommodate highway construction projects:

1. An existing pipeline shall be adjusted or protected where:

i. Proposed fill increases the utility's depth of bury greater than the Department's or utility's maximum allowable;

ii. Proposed cut decreases the utility's depth of bury less than the Department's or utility's minimum allowable, whichever is greater;

iii. The existing pipeline is in direct conflict with the Department's proposed project; or

iv. The existing pipeline is too weak to support highway loads;

2. An existing pipeline that is determined to be too weak to support highway loads shall be relocated, replaced by stronger pipe, or protected in a manner acceptable to both the Department and the utility. The relative risk with respect to the product carried and engineering and safety factors shall be considered; and

3. Suitable bridging, concrete slabs or other appropriate measures shall be used to protect an existing uncased pipeline, which lacks adequate bury depth, for protection against damage from highway vehicular loads and construction operations. Such existing lines may remain in place without further protective measures if they are adequately protected and do not conflict with highway construction or maintenance operations, provided both the Department and utilities are satisfied that the pipelines are, and will remain, structurally sound and operationally safe.

(b) The following shall apply when adjusting existing pipelines to accommodate highway construction projects:

1. An existing pipeline shall be protected in the same manner as a new pipeline within the project limits.

2. Notwithstanding reinforcement or protection otherwise provided, the highway construction contractor will be advised by the Department and made responsible for maintaining the integrity of each existing pipeline during construction, pursuant to Department plans and specifications or permit requirements that have been developed in consultation with the utility. At locations where heavy construction equipment will be used, construction operations could impact existing utilities, or some form of temporary utility hazard may exist, it shall be arranged by the contractor to provide temporary protection at each location, which may consist of increased cover, use of protective steel plates, structural bridging/encasement, temporary utility shut-down, alternative construction methods, and/or vibration monitoring.

3. On relocated and new installations, the utility shall be installed at a depth and of a strength to permit the excavation and reconstruction of the roadway pavement structure consistent with existing grades or the grades set by the infrastructure project and to allow for the maintenance or replacement of existing or proposed drainage infrastructure.

4. Utility installations shall adhere to the utility's vertical clearance requirements at drainage pipe and utility crossings.

SUBCHAPTER 9. UNDERGROUND ELECTRIC POWER AND COMMUNICATION LINES

16:25-9.1 Installation standards

(a) The installation or replacement of underground electric power and communication lines along or crossing existing highways shall be in accordance with Department plans and specifications or Department-issued permits. The safety of traffic and preservation of the earth structure supporting the pavement may require restriction of construction methods. Such conditions of installation, if any, will be specified by the Department.

(b) Pedestals or other above ground utility appurtenances installed as part of a buried cable facility shall be located as close to the right-of-way line as possible, and behind any existing guide rail.

(c) Consideration shall be given to placing additional manholes/handholes, spare conduit, or duct to accommodate known or planned expansion of underground lines, particularly at highway crossings and areas of high probability for future highway expansion, especially at intersections and structure locations.

(d) Fiber optic duct bank installations of one half-mile or longer shall require the utility to dedicate to the Department the use of one inner duct of a multi-duct system or one duct (two inch nominal size with associated separate manholes/handholes) of a single-duct system for State use. The utility shall construct the dedicated duct and associated manholes/handholes in accordance with the Department standards and maintain them in good repair. The State facility within assigned duct and manholes/handholes shall be the responsibility of the State. The utility shall not begin construction until the Department receives formal documentation indicating the utility's commitment to dedicate the duct use.

(e) The utility shall design and construct fiber optic duct banks to avoid future relocations within the limits of all projects listed in the Department's current fiscal year Capital Program and the 10-year Statewide Transportation Improvement Program. The Department may waive this requirement if the utility agrees to absorb all relocation or accommodation costs resulting from the construction of any project listed in the Capital Program and 10-year Statewide Transportation Improvement Program. The utility shall not undertake construction within the limits of such a project until the utility and the Department execute a written agreement regarding the payment of future relocation costs.

16:25-9.2 Location and alignment

(a) For all locations and alignments of new and relocated underground electric power and communication lines, an appropriately detailed evaluation shall be conducted by the utility, or the Department in consultation with the utility, to establish the presence, three dimensional location, and condition of existing underground utilities. Aged infrastructure, which may require special protection from damage, shall be identified. For underground electric power and communication relocations, plans for near term improvements or expansion of services by utilities shall also be identified.

(b) Crossings shall be located as near perpendicular to the highway alignment as practical.

(c) Conditions unsuitable or undesirable for underground crossings of a highway shall be avoided. These include, but are not limited to:

1. In deep cuts;

2. Near footings of bridges and retaining walls;

3. Across intersections at grade or ramp terminals;

4. At cross drains and culverts;

5. In wet or rocky terrain where it would be difficult to attain minimum bury depth; and

6. Within limits of Mechanically Stabilized Earth (MSE) walls.

(d) On longitudinal installations, utility locations parallel to the pavement at, or adjacent to, the right-of-way line are preferable to minimize interference with highway drainage, the structural integrity of the traveled way, shoulders, embankments, and the safe operation of the highway. Their lateral location shall be offset a suitable distance beyond the slope, ditch, or curb line. Except for crossings, longitudinal placement within the roadway shall be avoided. When installation of utility facilities in the roadway is unavoidable due to right-of-way or environmental constraints, lack of sufficient border area, or other significant restriction, the utility may be allowed in the roadway upon verification that there is no alternative to locating the facility in the roadway. Location of utilities in the roadway shall take into consideration existing and future drainage pipe and structures and the installation of future utility facilities and the efficient maintenance of existing infrastructure.

(e) Vertical and horizontal clearance between an underground electric power and communication facility and a highway structure or other highway or utility facilities shall be sufficient to permit maintenance of the utility and the other facilities.

(f) The minimum lateral proximity to a parallel utility facility, including the State's fiber optic ducts, shall be 18 inches from the edge of utility facility to the edge of utility facility. Electric power and communication cables, gas lines, water lines, and sewer lines shall be separated from one another as required by appropriate industry codes. Separation of the utility from highway facilities or other utilities shall allow for reasonable success in locating utilities with electronic devices.

(g) Placement of new utility manholes and handholes within the roadway shall be avoided. When installation of utility facilities in the roadway is unavoidable due to right-of-way or environmental constraints, lack of sufficient border area, or other significant restriction, the utility may be allowed in the roadway upon verification that there is no alternative to locating the facility in the roadway. The utility shall construct manholes or handholes so that the longest dimension is parallel to the roadway.

(h) When adjustment of existing facilities in the roadway is unavoidable, they shall not be located within a vehicular wheel path.

(i) Placement of underground electric power and communication facilities should avoid areas where damage from installation or replacement of guide rail, sign supports, or any other ground penetrating infrastructure is likely to occur.

(j) Installation of utilities within the limits of MSE walls will not be permitted.

(k) The age and type of material of adjacent utility infrastructure shall be considered in determining the offset distance and methods of construction.

16:25-9.3 Bury

(a) The low point(s) in the highway cross-section controls the depth that underground electric power and communication line crossings shall be buried and that depth is typically the bottom of any longitudinal ditch.

(b) The minimum bury depth shall be 36 inches. For fiber optic facilities the bury depth shall be as set forth in N.J.A.C. 16:25-9.4. Where minimum bury depth cannot be achieved due to the presence of other utilities, drainage structures, water table, or similar constraints, the electric power and communication line shall be rerouted or otherwise protected in a suitable manner that is in accordance with industry and utility company standards and approved by the Department.

(c) In establishing the bury depth below an unpaved ditch, consideration should be given to potential increases in ditch depth resulting from scour, ditch maintenance operations, or the current or future need to increase the capacity of the ditch.

(d) On longitudinal installations, the critical controls for bury are the depths of lateral drainage facilities, landscaping, other buried utility lines, bridge structures, and highway maintenance operations.

(e) The bury depth shall be sufficient to withstand the increased impact loads transmitted through frozen soil.

(f) To protect the integrity of the roadway, the bury depth of the underground electric and communication lines installed by trenchless methodology are dependent on size, material, utility carried, and method of construction. Bury depth is established on a case-by-case basis, in consultation with the utility.

16:25-9.4 Trenched construction and backfill

(a) Trenched construction, bedding, and backfill shall conform to the Department's standard specifications and construction details set forth in N.J.A.C. 16:25-1.3 and provisions of N.J.A.C. 16:25-7.3.

(b) Except for emergency repairs, no utility cuts shall be permitted in newly constructed pavement or overlay for five years without the consent of the Commissioner as documented in a waiver pursuant to N.J.A.C. 16:41-8. If utility cuts are required for emergency repairs, the utility company shall mill and resurface the section of the roadway to the standards established by the Department.

(c) The following requirements apply to utility opening for longitudinal installation of an underground fiber optic duct bank:

1. The utility shall bundle ducts to form one compact facility. The Department may allow a fiber optic utility duct bank to consist of more than four inner ducts, in the case of a multi-duct system, or more than four individual ducts, in the case of a single-duct system;

2. The duct bank shall not occupy over 12 inches in width or 24 inches in depth;

3. The minimum depth of cover of the duct bank shall be 54 inches. If there is a conflict with an intersecting utility facility at this depth, the utility shall install the fiber optic duct bank under the other utility. If the other utility extends deeper than 24 inches below the fiber optic duct bank, the fiber optic duct bank may be located above the other utility and shall be protected with concrete encasement as approved by the Department, but at no location will the encasement be within 24 inches of the surface of the ground;

4. There shall be a protective layer over the fiber of the duct bank which covers:

i. To within 30 inches of the surface with Permeable Flowable Fill (Controlled Low Strength Material). Orange pigmentation is encouraged, but not required; or

ii. With a cap of poured or pre-cast concrete that is four inches thick and 24 inches wide directly above the fiber optic duct bank; and

5. The utility shall install a continuous plastic ribbon marking tape on the Permeable Flowable Fill directly above the fiber optic duct bank or on the trench backfill material directly above the fiber optic duct bank.

16:25-9.5 Trenchless construction

(a) Acceptable techniques for installing underground electric power and communication lines under a highway without disturbing the surface are subject to specific site conditions including, but not limited to, driving, coring, boring, horizontal directional drilling, jacking, or pushing of pipe as conduit.

(b) The design and trenchless construction of underground electric power and communication lines under highways shall include the following:

1. The trenchless construction shall extend a suitable distance beyond the slope or ditch lines. Where appropriate, the trenchless construction shall extend to the access control lines, to the outside of frontage roads, or to an indicated line that allows for future widening of the highway without the need for any utility adjustment;

2. The portal limits of crossings shall be located beyond the surfaced areas of the highway to avoid impairing the roadway during installation; and

3. The Department will establish, on a case-by-case basis, the need to grout the voids outside the carrier.

(c) When trenchless installation is proposed by the utility, the utility shall furnish the Department with information regarding the construction methods, controls, and monitoring to be used.

16:25-9.6 Casing requirements

(a) Encasement is required for all utility facility crossings directly under State highways, unless a waiver is approved by the Department pursuant to N.J.A.C. 16:25-13.2.

(b) Casings shall also be used for, but not limited to, the following conditions:

1. As an expediency for the insertion, removal, replacement, or maintenance of utility crossings of highways and at other locations where it is necessary to avoid open trenched construction;

2. When protection from external loads or shock, either during or after construction of the highway is required;

3. When less than minimum bury depth is unavoidable;

4. Near footings of bridges or other highway structures or across unstable or subsiding ground; and

5. Near other locations where there may be a hazard.

(c) Casings shall be designed in accordance with the following requirements:

1. To support the load of the highway and superimposed loads thereon, and at a minimum, the casing shall equal the structural requirements for highway drainage facilities;

2. Be composed of material of satisfactory durability for the conditions to which they may be exposed;

3. Extend a suitable distance beyond the slope or ditch lines. Where appropriate, extend the casing to the access control lines, to the outside of frontage roads, outside the outer curbs on curbed roadways, or to an indicated line that allows for future widening of the highway without the need for any utility adjustment;

4. The casing ends sealed with a flexible material to prevent flowing water and debris from entering the annular space between the casing and the carrier. All necessary appurtenances shall be included; and

5. If required, provided with cathodic protection anti-corrosion systems. The utilities shall be effectively insulated from each other, cathodically protected as a unit, or provided with alternative protection.

(d) Approved uncased carrier pipelines crossing a highway shall require a higher factor of safety in the location, design, construction, and testing, including such features as increased depth of cover, thicker wall conduit, use of greater strength conduit, and joint-less installations.

(e) For Department projects, if it has been determined that both cased and uncased utility crossing alternatives are technically acceptable, the most economical alternative shall be considered. If the utility elects to advance a betterment or a more costly alternative, the utility is responsible for the cost differential.

16:25-9.7 Appurtenances

(a) Readily identifiable and suitable markers shall be placed on the right-of-way line where it is crossed by the utility. Markers are also required for longitudinal installations and shall be spaced at a distance which allows visibility between adjacent markers.

(b) Manholes and handholes shall be designed and located in such a manner that will cause the least interference to other utilities and future highway expansion. New manholes and handholes shall not be located in the pavement of highways.

16:25-9.8 Utility tunnels

(a) The Department may require that a utility tunnel be constructed for a utility crossing of a highway when it can be foreseen that several utility crossings will be needed, or the cost of the tunnel (either a large casing, box culvert, or three-sided culvert) may be less expensive than the alternate of several trenchless or separately encased utilities. The utilities shall consider the need for future crossings and the convergence of their facilities to a joint-use single crossing.

(b) In a utility tunnel that will serve multiple utilities, provision shall be made to isolate mutually hazardous facilities, by compartmentalization or by auxiliary encasement of incompatible carriers. The utility tunnel structure shall conform to the culvert and bridge standards of the Department.

16:25-9.9 Adjustment of existing underground power and communication lines

(a) The following shall be applied to determine when existing underground electric and communication facilities need adjustment to accommodate highway construction projects:

1. An existing underground electric and communication facility shall be adjusted or protected where:

i. Proposed fill increases the utility's depth of bury greater than the Department's or utility's maximum allowable;

ii. Proposed cut decreases the utility's depth of bury less than the Department's or utility's minimum allowable, whichever is greater;

iii. The existing underground electric and communication facility is in direct conflict with the Department's proposed project; or

iv. The existing underground electric and communication facility is too weak to support highway loads.

2. An existing utility that is determined to be too weak to support highway loads shall be relocated, replaced by stronger material, or protected in a manner acceptable to both the Department and the utility. The relative risk with respect to the product carried and engineering and safety factors shall be considered.

3. Suitable bridging, concrete slabs, or other appropriate measures shall be used to protect an existing utility, which lacks adequate bury depth, for protection against damage from highway vehicular loads and construction operations. Such existing lines may remain in place without further protective measures if they are adequately protected and do not conflict with highway construction or maintenance operations, pro-

vided both the Department and utilities are satisfied that the utilities are, and will remain, structurally sound and operationally safe.

(b) The following shall apply when adjusting existing underground electric and communication facilities to accommodate highway construction projects:

1. An existing utility shall be protected in the same manner as a new utility within the project limits.

2. Notwithstanding reinforcement or protection otherwise provided, the highway construction contractor will be advised by the Department and made responsible for maintaining the integrity of each existing utility within the construction zone during construction, pursuant to Department plans and specifications or permit requirements that have been developed in consultation with the utility. At locations where heavy construction equipment will be used, construction operations could impact existing utilities, or some form of temporary utility hazard may exist, it shall be arranged by the contractor to provide temporary protection at each location, which may consist of increased cover, use of protective steel plates, structural bridging/encasement, temporary utility shut-down, alternative construction methods, and/or vibration monitoring.

3. On relocated and new installations, the utility shall be installed at a depth and of a strength to permit the excavation and reconstruction of the roadway pavement structure consistent with existing grades or the grades set by the infrastructure project and to allow for the maintenance and replacement of existing or proposed drainage infrastructure.

4. Utility installation shall adhere to the utility's vertical clearance requirements at drainage pipe and utility crossings.

SUBCHAPTER 10. OVERHEAD POWER AND COMMUNICATION LINES

16:25-10.1 General provisions

(a) Ground-mounted utility facilities shall be placed as far as practical from the traveled way and as near as practical to the right-of-way line and are restricted in certain locations as follows:

1. No above ground facilities shall be located within grade separated interchange areas of limited access highways.

2. No aerial crossing of limited access highway right-of-way shall be permitted with the exception of electrical facilities operating at a potential of 26 KV or above.

(b) When replacing an existing pole, the utility shall remove the existing pole within 90 calendar days following installation of the new pole.

(c) For Department projects, upon approval of the Utility Owner Design Authorization, the Department will consider acquiring pole guy property rights at critical locations if the utility has identified proposed guy easement locations in advance, so as not to interfere with the project's right-of-way acquisition schedule.

16:25-10.2 Installation standards

(a) Installation of overhead lines on highway right-of-way shall be limited to single wooden pole type of construction unless a waiver is approved by the Department pursuant to N.J.A.C. 16:25-13.3.

(b) Use of non-wooden poles requires Department approval of a waiver, pursuant to N.J.A.C. 16:25-13.3.

(c) Installation of non-wooden poles approved by the Department pursuant to a waiver shall comply with the provisions of this chapter.

(d) At locations where more than one utility or type of facility is involved, every effort should be made to limit utility poles to one side of the highway with joint usage, as indicated by Rule 222 of the National Electrical Safety Code. This is of particular significance at locations where the right-of-way widths approach the minimum needed for safe operation or maintenance requirements or where separate installations may require extensive removal or alteration of trees.

(e) Utility pole delineators are reflective markers placed on utility poles that provide the driver of a vehicle with the alignment of the roadway and the location of the pole by their reflection of the car's lights during nighttime hours of sunset to sunrise. Utility pole delineators shall be placed on relocated poles and poles involving new utility installation at locations vulnerable to vehicular impact, such as islands, gore areas, outside of horizontal curves, and critical locations described in N.J.A.C. 16:25-10.3(d) and (*o*). Existing utility poles with a history of multiple vehicular hits shall be furnished with delineators as part of the maintenance or replacement process.

(f) Utility companies shall be responsible to meet the Department's standard highway lighting power source requirements. For utility company owned lighting designated to provide lighting for the State highway, the utility companies shall be responsible to meet the Department's standard highway lighting requirements by furnishing, installing, and maintaining highway lighting fixtures approved by the Department with appropriate power supplies. All highway lighting requirements shall be developed in consultation with the utility. Standard lighting on new utility pole installations shall be installed in a reserved area at a pole height of approximately 26 feet.

(g) Pole attached utility components including, but not limited to, solar panels, antennas, and cameras, shall be positioned within the designated zone for the respective utility.

16:25-10.3 Location and alignment

(a) Utility poles shall be located as close to the right-of-way as practical, preferably no further than five feet from the right-of-way line as allowed by cross-arm aerial clearance requirements. Aerial easements shall be considered to accommodate cross-arms to achieve the desired pole offsets.

(b) Location of overhead utilities on highways with narrow right-of-way or on urban streets with closely abutting improvements requires special consideration. Utility poles shall be located behind the sidewalk, as far as practical from the curb or gutter line.

When this is not feasible, poles may be placed between the sidewalk and the curb or gutter line, as close to the sidewalk as possible. If site constraints require utility poles to be placed within the sidewalk area, they shall be located in compliance with the Department's Roadway Design Manual by maintaining the minimum useable width of sidewalk to allow for wheelchair passage. In no case shall the face of the utility poles be located closer than 1.5 feet from the face of the curb or the gutter line.

(c) The distance between utility poles should be the longest feasible span length consistent with geometric and design line loading considerations.

(d) In areas where advisory speed, speed reduction, and/or horizontal alignment warning signs are posted in advance of highway curves, consideration shall be given to relocating the poles to the inside of the curve, installing the facility underground, or some other cost effective alternative, which avoids the placement of poles on the outside of the curve. Should pole placement be required along the outside of the horizontal curve, the number of poles shall be held to a minimum and pole offsets shall be increased to the maximum allowable given the site constraints.

(e) Where a guide rail is present, utility poles shall be located in accordance with the Department's Roadway Design Manual.

(f) Utility poles shall be located longitudinally at least 50 feet beyond an exit terminal or gore/island approach end. Placement of poles in islands that do not have a longitudinal through roadway length of 100 feet or more is discouraged, except where other locations are unusually difficult and unreasonably costly.

(g) Poles being installed in proximity to a bridge structure shall maintain a minimum offset distance equal to or greater than the exposed height of the pole.

(h) Guy wires to ground anchors and stub poles shall not be placed between a pole and the traveled way where they encroach upon the clear zone area. Push brace poles shall not be placed between the utility pole and the traveled way.

(i) Where irregular shaped portions of the right-of-way extend beyond the parallel right-of-way limits, variances in the location from the right-of-way line may be allowed, as necessary, to maintain a reasonably uniform alignment for longitudinal overhead installations.

(j) Poles, guys, or other related facilities shall not be located in a highway median unless other alternatives are determined to be impractical and where suitable protection is provided to the highway user.

(k) At locations where a traffic signal standard, traffic signal standard mounted lighting assembly, separate lighting standard, or overhead sign structures exists, the installation shall conform to the provisions of N.J.A.C. 16:25-10.4.

(*l*) When electrical facilities (26 KV and above) are approved for installation across limited access highway right-of-way in accordance with N.J.A.C. 16:25-12, they shall be installed in accordance with the criteria set forth in this chapter; however, the proximity criteria used shall take into account not only existing highway facilities such as light standards and sign supports, but also facilities that the Department proposes within the area where the utility crossing will be constructed.

(m) To the greatest extent possible, utility poles should be located longitudinally along the roadway. Aerial crossings over roadways should be minimized and longitudinal aerial spans over roadways should be avoided.

(n) Placement of utility poles, guys, or other utility related facilities within intersection corner quadrants should be avoided. If utility poles are required at an intersection, pole placement should be designed to avoid the most crash vulnerable locations involving potential secondary collisions (collision of a vehicle with a pole resulting from an initial two vehicle collision).

(*o*) The placement of poles shall be avoided at critical locations, such as lane drops, deceleration lanes, "T" intersections, and sections where the pavement narrows. If it is impractical to span these areas, the Department may approve locating the pole in the area least vulnerable to vehicular impact.

16:25-10.4 Clearance requirements

(a) The minimum clearances for overhead power and communication lines shall in no case be less than the standards prescribed by the National Electrical Safety Code (NESC).

(b) When rebuilding an existing pole line or constructing a new pole line at locations where there are no traffic signal standards, lighting standards, or overhead sign structures, poles of not less than 40 feet in overall length shall be installed and the attached primary line, at its lowest point, shall have a minimum clearance of 30 feet from the ground.

(c) At locations where the Department has identified a future need to install new or upgraded traffic signal standards, lighting standards, or sign structures, poles of not less than 50 feet in overall length shall be installed.

(d) The minimum clearances between overhead power lines and highway traffic signals, traffic signal pole mounted lighting arms, cameras, antennas, other appurtenances, or lighting standards shall be determined as follows. Voltages are measured phase to ground.

	Minimum Clearances	
Power Line Voltages	Lateral	Vertical
0-750 volts	NESC	NESC
750 volts-50 KV	NESC or 10 feet, whichever is greater	NESC or 10 feet, whichever is greater
Above 50 KV	NESC or 10 feet, plus 0.4 inches per kilovolt	NESC or 10 feet, plus 0.4 inches per kilovolt

1. Overhead power lines conforming to either (d)1i or ii shall adhere to the minimum clearances prescribed by the NESC:

i. Cables of any voltage covered with a continuous auxiliary semi-conducting shield in combination with suitable metallic drainage and supported on and cabled together with an effectively grounded bare messenger.

ii. Insulated, non-shielded cable operated at not over five KV phase to phase, or 2.9 KV phase to ground, effectively grounded bare messenger.

(e) The minimum clearances between overhead power lines and highway signs, sign standards, or sign bridges shall be as follows.

	Minimum Clearances	
Power Line Voltages	Lateral	Vertical
0-750 volts	NESC	NESC
750 volts-50 KV	NESC or 10 feet, whichever is greater	NESC or 10 feet, whichever is greater
Above 50 KV	NESC or 10 feet, plus 0.4 inches per kilovolt	NESC or 10 feet, plus 0.4 inches per kilovolt

SUBCHAPTER 11. INSTALLATION ON HIGHWAY STRUCTURES

16:25-11.1 General provisions

Attachment of utilities to bridge structures shall be avoided. For bridge replacement projects, the Department will take into consideration utilities currently attached to the bridge in the evaluation and selection of bridge types. Each approved attachment will be evaluated on an individual basis and approval will not establish a precedent for granting future approvals.

16:25-11.2 Installation standards

(a) Acceptable utility installations are those that will occupy a position beneath the structure's floor, between the outer girders or beams, or within a cell and at an elevation above the low point of the super-structure steel or masonry. The following restrictions shall apply:

1. No utilities shall be placed in the deck, sidewalk, or parapet of a bridge.

2. No utility shall be placed outside the parapet where people may walk on it.

3. The Department prohibits placement of gas, water, sewer mains, or other hazardous utility facilities inside box beams or other enclosed structural elements. Due to homeland security and safety concerns, the Department may prohibit placement of electric and communication lines on certain bridge types. For bridge replacement projects, the Department shall take into consideration utilities currently attached to the bridge in the evaluation and selection of bridge types.

4. Connections for utility supports to pre-stressed concrete beams shall be made to inserts cast in the beams. Drilling into pre-stressed concrete beams shall not be permitted.

5. Utility facilities shall not be supported by a system which requires inserts in the concrete deck slab.

6. Conglomeration of utilities in the same bay should be avoided in order to facilitate inspection and painting of the structure.

7. Unless appropriate devices are provided at bridge deck joints to accommodate movement, bridge-mounted utilities shall not be rigidly attached to the structure.

8. Galvanized structural steel shall be utilized for supports where structural elements cannot be utilized to carry loads.

9. Welding to structural steel beams shall not be permitted.

10. Ducts shall be provided for electrical and communication cables.

11. Pipes carrying liquids under pressure shall be sleeved within 10 feet of abutments, walls, and piers.

12. Pipes installed through abutment backwalls shall be placed in steel sleeves, coated with a corrosion inhibiting material, and set in non-shrink grout with the opening between the pipe and the sleeve sealed to prevent leakage through the backwall.

(b) The provisions of N.J.A.C. 16:25-8.1(c), 8.6, and 8.7(a)5 shall be followed for pipeline attachments to bridge structures, except that sleeves shall be required only through abutment backwalls.

(c) Since a casing is not typically provided for a pipeline attachment to a bridge, additional protective measures shall be taken, including employing a higher factor of safety in the design, construction, and testing of the pipeline.

(d) Where a pipeline attachment to a bridge is in a casing, the casing shall be effectively opened or vented at each end to prevent possible buildup of pressure and to detect leakage of gases or fluids.

(e) For pipelines under pressure, shut-off valves, preferably automatic, shall be provided on both sides of a bridge.

(f) Communication and electric power line attachments shall be suitably insulated, grounded, and carried in protective conduit or pipe from the point of exit from the ground to re-entry. The conduit shall be carried to a manhole located beyond the backwall of the structure. Carrier pipe and casing shall be suitably insulated from electric power line attachments.

(g) Guy wires supporting any utility facility shall not be attached to a bridge structure.

(h) Cell phone or other type antennas shall not be mounted from or on any bridge or sign supported structure.

SUBCHAPTER 12. UTILITY FACILITIES OCCUPYING LIMITED ACCESS HIGHWAY

16:25-12.1 General provisions

(a) Public utilities as defined by N.J.S.A. 48:2-13 will be considered by the Department for permission to longitudinally occupy limited access highway right-of-way when it can be demonstrated to the satisfaction of the Department that extreme cases of need exist, that it can be shown to be in the best public interest and that the safety criteria enumerated below can be met.

1. The Department will take the following under consideration when evaluating claims of extreme cases of need:

i. A utility can demonstrate that alternate locations are not available or cannot be implemented at reasonable cost, as determined by the Department, in consultation with the Federal Highway Administration, from the standpoint of providing efficient utility services in a manner conducive to safety, durability, and economy of maintenance and operations;

ii. That the accommodation will not adversely affect the design, construction, operation, maintenance, security, or stability of the limited access highways;

iii. That it will not interfere with or impair the present use or future expansion of the limited access highways; and

iv. That disapproval of the use of the right-of-way would result in the loss of productive agricultural land, or loss of productivity of agricultural land, if any.

2. The Department will apply the following safety criteria:

i. The public utility facility shall be placed underground;

ii. The public utility facility shall not be used for transmitting gases or liquids under pressure, or for the transmission of products which are flammable, corrosive, expansive, energized, or unstable;

iii. The public utility facility shall not emit any measurable nuclear radiation above or below the ground surface.

iv. The public utility facility shall present no hazard to life, health, or property if it fails to function properly, is severed, or otherwise damaged; and

v. After the public utility facility is installed, it will be virtually maintenance free.

(b) A public utility, which is granted a highway occupancy permit for longitudinal occupation of State right-of-way shall not sell, lease, or otherwise transfer any rights of the permit to another public utility unless such a transfer is approved by the Department.

(c) Every longitudinal occupancy installation agreement or permit shall specify a utility access control line between the proposed utility installation and the through roadway and ramps.

(d) Access to the public utility facilities for the purpose of installation, repair, or maintenance shall not be achieved from highway ramps or roadways, but rather from local roads or points outside of the limited access highway's control of access line. All access shall be achieved in accordance with the Department approved traffic control plan, pursuant to N.J.A.C. 16:41 and in consultation with the Federal Highway Administration, as applicable.

(e) Utility crossings of limited access highways are to be held to a practical minimum and shall meet all applicable provisions of this chapter.

16:25-12.2 Installation standards

(a) No above ground facilities of any kind shall be permitted within the limited access highway right-of-way.

(b) No above or below ground regenerator or backup power manholes or enclosures shall be permitted within limited access highway right-of-way.

(c) Handholes for the purpose of cable splicing or installation shall be permitted and shall not extend above the surrounding ground.

(d) Cable shall be placed in conduit.

(e) Above ground warning signs bearing the public utility's name and contact number shall be mounted by the utility upon adjacent control of access fencing at line-of-sight intervals or as specified in the highway project utility agreement or the highway occupancy permit.

(f) Service connections to adjacent properties from within the limited access highway right-of-way are prohibited unless the Department makes the determination that the connections cannot be otherwise accommodated and, therefore, will be permitted. If permitted, they shall be located as close as feasible to the highway's right-of-way line.

(g) Fiber optic duct banks shall be buried at least 54 inches deep. The utility shall install a continuous plastic ribbon marking tape along the duct banks at least 12 inches below the existing ground and above the fiber optic duct bank. The fiber optic duct bank shall be detectable by locator equipment operated on the surface. The utility shall bundle ducts to form one compact facility. The Department may allow a fiber optic utility duct bank to consist of more than four inner ducts, in the case of a multi-duct system, or more than four individual ducts, in the case of a single-duct system. The duct bank shall not occupy over 12 inches in width or 24 inches in depth. The width of excavation shall not exceed 18 inches.

(h) Fiber optic duct bank installations of one half-mile or longer shall require the utility to dedicate to the Department the use of one inner duct of a multi-duct system or one duct (two inch nominal size with associated separate manholes/handholes) of a single-duct system for State use. The utility shall construct the dedicated duct and associated manholes/handholes in accordance with the Department standards and maintain them in good repair. The State facility within assigned duct and manholes/handholes shall be the responsibility of the State. The utility shall not begin construction until the Department receives formal documentation indicating the utility's commitment to dedicate the duct use.

(i) The utility shall design and construct fiber optic duct banks to avoid future relocations within the limits of all projects listed in the Department's current fiscal year Capital and the 10-year Statewide Transportation Improvement programs. The Department may waive this requirement if the utility agrees to absorb all relocation or accommodation costs resulting from the construction of any project listed in the Capital Program and 10-year Statewide Transportation Improvement Program. The utility shall not undertake construction within the limits of such a project until the utility and the Department execute a written agreement regarding the payment of future relocation costs.

16:25-12.3 Location and alignment

(a) Transverse installations associated with longitudinal occupancy of the limited access highway shall occur within interchange areas.

(b) Installations shall continue along the respective control of access line even when encountering rest areas, scenic overlook sites, truck weigh stations, and other such facilities.

16:25-12.4 Underground utility corridors

(a) Where the Department determines that the public utility facility installation is feasible, the Department will establish, within the right-of-way of limited access highways, a corridor, generally not closer than 30 feet to the edge of roadway, but contiguous to each side of the roadway's control of access line, for the installation of underground utility facilities. Should such an exception allow a public utility facility to be placed within 15 feet of the edge of pavement, the facility shall be installed within a casing or with a protective layer in accordance with N.J.A.C. 16:25-9.4(c)4 and 5.

(b) Consideration will be given by the Department for prudent utilization of the corridor to provide for multiple occupancy; however, the Department will not reserve space within said corridor for any particular facility or utility.

(c) At interchange areas, the installation corridor shall continue along the control of access boundary outside of the outermost roadway or ramp.

SUBCHAPTER 13. WAIVERS

16:25-13.1 General provisions

(a) Waivers, as described in this section, apply to all sections of this chapter when reduction, modification, or elimination of requirements are proposed.

(b) No waivers or other relief from design standards or other provisions of this chapter may be granted unless the waiver can be granted without substantial detriment to the safety and operation of the highway and without substantially deviating from the intent and purpose of this chapter.

(c) Applicants seeking a waiver shall submit a request to the Department's appropriate Operations Permit Office as an attachment to the highway occupancy permit application or to the Department's Project Manager responsible for administering the utility agreement. The applicant shall submit a completed Department form MT-159, Request for Waiver, which shall include supporting documentation. A copy of the form shall be provided to the Department's Utility Coordination Unit. The waiver may also need to be reviewed and approved by the Federal Highway Administration, if the highway was designed, constructed, or improved with Federal funds.

(d) If a waiver is granted, the approval will be incorporated in the conditions of the highway occupancy permit or utility agreement for highway projects designed and constructed within the Department's authority.

16:25-13.2 Uncased crossings

(a) Except when support of the pavement would be impaired by depression of flexible carrier pipe, the Department may approve an uncased crossing if it can be demonstrated that the uncased installation for the specific site conditions and methods used can provide a safe and reliable utility facility. Uncased alternatives shall be reviewed and approved by the Department.

(b) Factors that shall be considered in the evaluation of an uncased trenchless utility crossing alternative include, but are not limited to, the following:

1. Soil type and condition;

2. Depth of installation;

3. Alignment;

4. Right-of-way availability;

5. Roadway type;

6. Groundwater elevation;

7. Location of existing utility facilities;

8. Potential physical obstructions;

9. Site access;

10. Location of shut off or control valves (for pipelines only); and

11. Cost.

(c) If the utility elects to pursue an uncased utility crossing, the following supporting documentation shall be provided in a technical memorandum to the Department for review and approval:

1. Justification of proposed installation method;

2. Relevant industry design standards utilized;

3. Control of work and operations monitoring methods;

4. Mitigation technique for resolving obstruction conflicts;

5. Emergency action plan;

6. Leak detection and monitoring plan (for pipelines only);

7. Cathodic protection monitoring plan; and

8. Professional certification.

16:25-13.3 Pole installation

(a) On a case-by-case basis, when public safety is not compromised, the Department may approve use of a non-wooden pole when installing a new pole or replacing an existing pole.

(b) Factors that shall be considered in the evaluation of the installation of a non-wooden pole include, but are not limited to, the following:

1. Utility pole location(s) - roadway border area; traveled-way offset; right-of-way availability; existing/proposed sidewalk area;

2. Roadway classification;

3. Roadway alignment;

4. Accident history;

5. Clear Zone - guide rail warrant analysis; guide rail/barrier protection;

6. Utility pole(s) joint usage considerations;

7. Utility maintenance - site access; frequency; workspace, relocation requirements and responsibilities;

8. Public safety;

9. Existing utilities; and

10. Maintenance and protection of traffic - for construction, maintenance, emergency repair.

SUBCHAPTER 14. SEVERABILITY AND INDEMNIFICATION

16:25-14.1 Severability

If any provision of this chapter is held invalid, the remainder of the chapter shall not be affected and shall remain in full force and effect.

16:25-14.2 Indemnification

(a) The public utilities and cable television companies shall defend, indemnify, protect, and hold harmless the State of New Jersey and the Department against any and all suits, claims, losses, demands, or damages imposed by law as the result of the installation operation or maintenance of the public utility facilities, including, but not limited to, any damage, disruption, or interference of other public utility facilities within the highway's right-of-way.

(b) The public utilities and cable television companies shall defend, indemnify, protect, and hold harmless the State of New Jersey and the Department from any claims or costs associated with damage to their utility facilities or disruption of utility service resulting from Department employees' operations within the highway's right-of-way, except from gross negligence or intentional misconduct.