

# Policy for Accommodating Utilities on State Highway Rights-of-Way 1985

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Iowa Department  
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UTILITY ACCOMMODATION POLICY

of the

IOWA DEPARTMENT OF TRANSPORTATION

HIGHWAY DIVISION

ADOPTED MAY 1970

Revised February 1973

REVISED AND ADOPTED

APRIL 1985

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The following information is provided as an aid in determining the applicable sections for the following types of occupancy.

I. Power and Communication Lines

A. Overhead

1. Transverse, Sections 1 through 11 and 13
2. Longitudinal, Sections 1 through 10, 12 and 13
3. Bridge Attachments, Sections 1 through 10 and 17

B. Underground

1. Transverse, Sections 1 through 11, 14, 15 and 16
2. Longitudinal, Sections 1 through 10, 12, 14, 15 and 16
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II. Pipelines

A. Underground

1. Transverse, Sections 1 through 11, 14, 15 and 16
2. Longitudinal, Sections 1 through 10, 12, 14, 15 and 16
3. Bridge Attachments, Sections 1 through 10 and 17

UTILITY ACCOMMODATION POLICY  
of the  
IOWA DEPARTMENT OF TRANSPORTATION

WHEREAS, proper regulation of the location, design, and methods for installation, maintenance and adjustment of private and public utility facilities on the Iowa Primary Road System is necessary for safety, public service and orderly development, and

WHEREAS, it is the desire of the Department that such regulations be established and uniformly administered in a manner which will be in the best interest of the Primary and Interstate Road System and the public use thereof, with due consideration given to the public service afforded by adequate and economical utility installations, and

WHEREAS, Section 306A of the Code of Iowa states that the Iowa Department of Transportation has authority to plan, regulate and control the use of all highways which have been designated or established as primary road controlled access facilities, and

WHEREAS, the Iowa Department of Transportation has designated all primary highways, exclusive of the Secondary Roads System, the Institutional Road System, and the State Park System as controlled access highways, and

WHEREAS, as an exercise of the authority granted by Section 306A of the Code of Iowa, the Iowa Department of Transportation desires to establish uniform regulations for allowing utility facilities to occupy primary highway right of way.

NOW, THEREFORE, BE IT ORDERED that the attached Utility Accommodation Policy of the Iowa Department of Transportation be adopted.

STATEMENT OF POLICY

This policy covers initial placement, adjustment, relocation and replacement of utility facilities in, on, above or below all highway right of way over which the Iowa Department of Transportation exercises control of access. It embodies the basic specifications and standards needed to insure the safety of the highway user and the integrity of the highway.

The Iowa Department of Transportation recognizes that any policy which is adopted may create some unforeseen burdens, hardships or problems, and for that reason the Iowa Department of Transportation reserves the right to vary the provisions of this policy, consistent and harmoniously, however, with the general purposes and intent of the policy where in the exercise of sound and reasonable judgment, literal application of such policy would defeat the objectives herein above set forth.

## SECTION 1. DEFINITIONS

### Agreement

A contract between the Iowa Department of Transportation and a utility company relative to utility facility relocation and reimbursement.

### ANSI

American National Standards Institute

### Appurtenances

Utility facility related features such as vents, drains, manholes, markers, etc.

### Backfill

Replacement of suitable material compacted as specified around and over a pipe, conduit, casing, or gallery.

### Cable

An insulated conductor or combination of insulated conductors.

### Carrier

Pipe directly enclosing a transmitted fluid (liquid or gas), or slurry.

### Casing

A larger pipe enclosing a carrier.

### Clear Roadside Policy

The policy employed by a highway authority to increase safety, improve traffic operation, and enhance the appearance of highways by designing, constructing, and maintaining highway roadsides as wide, flat, and rounded as practical and as free as practical from physical obstructions above the grounds such as trees, drainage structures, massive sign supports, utility poles, and other ground mounted obstructions.

### Clear Zone

That roadside border area, starting at the edge of the traveled way available for use by errant vehicles.

### Communication Line

A circuit for telephone, telegraph, alarm systems, television transmission or traffic control purposes.

### Conduit or Duct

An enclosed tubular runway for protecting wires or cables.

### Control of Access

A highway or street especially designed for through traffic, and over, from or to which owners or occupants of abutting land or other persons have no right or easement of access, or only a controlled right or easement of access, by reason of the fact that their property abuts upon such controlled access facility or for any other reason. All primary highways are controlled access highways.

Cover

Depth to top of underground utility facility below grade of roadway or ditch.

Fully Access-Controlled Highways

Primary highways on which the rights of ingress and egress from abutting properties has been legally eliminated and which have grade separated intersections, only, with selected roads and streets.

Department

Iowa Department of Transportation, acting in behalf of the State of Iowa.

Direct Burial

Installing a utility facility underground without encasement, by plowing.

Drain

Appurtenance to discharge moisture or liquid contaminants from casings.

Encasement

Structural element surrounding a pipe or cable

Engineer

The Chief Engineer of the Department acting directly or through his duly authorized representative, such representative acting within the scope of the particular duties assigned to him, or of the authority given him.

Freeway

Those roads so designated in accordance with 306.1(2)"a" of the Code of Iowa for which access is allowed only at interchanges with designated public roads. Freeways shall be defined for this policy as a fully access controlled constructed highway.

Non-Freeway

Highways as defined in this policy shall refer to all primary highways not designated in accordance with 306.1(2)"a" of the Code of Iowa and shall include Expressways, Arterials and Arterial Connectors, as defined in 306.1(2) of the Code of Iowa.

Frontage Road

A public street or road auxiliary to and usually located along side and parallel to a primary highway for purposes of maintaining local road continuity and for control of access.

Gallery

An underpass for two or more utility lines.

Grade Separation

A structure which carries an intersecting highway over or under another highway or railroad.

Highway, Street or Road

A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.



Interchange

A system of interconnecting highways in conjunction with a grade separation or separations providing for the interchange of traffic between two or more intersecting roadways.

Manhole

An opening in an underground system which workmen or others may enter for the purpose of making installations, inspections, repairs, connections, and tests.

Median

The portion of a divided highway separating the traveled ways for traffic in opposite directions.

MUTCD

Manual on Uniform Traffic Control Devices.

Natural Gas Distribution System

Natural gas mains within municipalities together with mains extending out of municipalities to serve patrons and those mains extending from transmission or feeder mains into municipalities provided such lines are plainly and adequately marked as to location. All lines referred to within this definition shall be constructed to Class 4 standards as defined by the U.S. Department of Transportation, Transportation of Natural Gas and Other Gas by Pipeline; Minimum Safety Standards.

Pavement

That portion of the roadway used for the movement of vehicles, exclusive of shoulders.

Pavement Structure

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

Permit

Use and occupancy agreement.

Pipe

A tubular product made as a production item for sale as such. Cylinders formed from plate in the course of the fabrication of auxiliary equipment are not pipe as defined here.

Pipeline

A carrier system used to transport liquids, gases, or slurries.

Plowing

Direct burial of utility lines by means of a plow type mechanism which breaks the ground, places the utility line and closes the break in the ground in a single operation.

Power Lines

Overhead electrical conductors with supporting poles or structures and underground electrical conductors or cables with the conduit in which they are contained.

Pressure

Relative internal pressure in ppsig (pounds per square inch gauge).

Primary Roads or Primary Highways

Those roads and streets so designated in accordance with 306.3(2) of The Code. This definition includes primary road extensions in municipalities.

Private Utility Facility

Any pole, poleline, pipe, pipeline, tileline sewer line, conduit, conveyor cable, aqueduct, or any other structure or appurtenance thereof which is privately owned and dedicated to private use.

Public Utility Facility

Any pole, poleline, pipe, pipeline, pipeline company facility, conduit, cable, aqueduct, or any other structure or appurtenance thereof whether publicly or privately owned which is used to provide a service to the public or which is directly or indirectly dedicated to public use

Relocation

The removal, rearrangement, reinstallation, protection, or adjustment of a utility facility.

Right-of-Way

A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes. For the purposes of this policy, the right-of-way line for a freeway is the access control line.

Roadway

The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.

Rural Type Roadways

Any roadway other than an urban type roadway.

Safety Rest Area

A roadside area with parking facilities separated from the roadway provided for motorists to stop and rest for short periods. It may include drinking water, toilets, tables and benches, telephones, information, and other facilities for travelers.

Scenic Overlook

A roadside area provided for motorist to stop their vehicles beyond the shoulders, primarily for viewing the scenery in safety.

Service Connection

Any water, gas, power, or communication line which extends from the main or primary utility facility into an adjacent property and which is used to serve that property.

Shoulder

The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for the lateral support of the base and surface courses.

Slope Limit or Toe of Slope

The intersection of the fore slope, and natural ground or ditch bottom.

State

State of Iowa.

Traveled Way

The portion of the roadway for movement of vehicles, exclusive of shoulders and auxiliary lanes.

Trenched

Installed in a narrow open excavation.

Untrenched

Installed without breaking ground or pavement surface, such as by jacking or boring.

Urban Type Roadway

A roadway which has as its outside extremities a curb and gutter section.

Use and Occupancy Agreement

The document by which the highway authority regulates and/or gives approval of the use and occupancy of highway rights-of-way by utility facilities.

Utility

The term "utility" shall include all privately, publicly, municipally or co-operatively owned systems for supplying water, sewer, electric lights, street lights and traffic lights, gas, power, telegraph, telephone, transit, pipeline, heating plants, railroads and bridges, or the like service to the public or any part thereof if such system be authorized by law to use the streets or highways for the location of its facilities.

Vent

Appurtenance to provide ventilation of or to discharge gaseous contaminants from casings.

SECTION 2. APPLICABILITY OF STANDARDS

- 2-1 This policy shall become effective on the date of issuance and shall supersede all previously published Iowa Department of Transportation standards and policies concerning the accommodation of utility facilities.

- 2-2 It is the intent of this policy to effectuate and incorporate all of the provisions of Federal Highway Administration F.H.P.M. 6-6-3-2 and the AASHTO policies, "A Policy on Accommodation of Utilities within Freeway Right-of-Way" and "A Guide for Accommodating Utilities within Highway Right-of-Way" which are not in conflict with the provisions of this policy.
- 2-3 Where it is clear that the application of a standard established herein will in any particular case be unnecessarily stringent, consideration may be given to more appropriate requirements for the particular case. Where a variation is proposed Department approval and, where required, Federal Highway Administration concurrence must be obtained.
- 2-4 The owner of the utility facility shall assure itself and be responsible that the proposed utility projects meet the applicable requirements of this policy, applicable local, municipal, and county codes, applicable franchise rules and regulations and all applicable laws, regulations and directives promulgated by the Iowa State Commerce Commission, regulations of the State Department of Water, Air and Waste Management or any other laws, regulations or standards applicable. These requirements shall include, but not be necessarily limited to, the following:
- A. Electric power and communication facilities should conform with the currently applicable National Electrical Safety Code.
  - B. Water lines should conform with the currently applicable specifications of the American Water Works Association.
  - C. Pressure pipelines should conform with the currently applicable Federal and industry design, construction, and safety codes, including:
    - 1. Chapter 49, Code of Federal Regulations Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards.
    - 2. Chapter 49, Code of Federal Regulations Part 195, "Transportation of Hazardous Liquids by Pipeline."
    - 3. American National Standards Institute B31 Codes:
      - a. Power Piping, ANSI B31.1.
      - b. Petroleum Refinery Piping, ANSI B31.3.
      - c. Liquid Petroleum Transportation Piping Systems, ANSI B31.4.
      - d. Gas Transmission and Distribution System Piping, ANSI B31.8.
  - D. Natural gas mains within municipalities together with mains extending out of municipalities shall be constructed to Class 4 standards as defined by the U.S. Department of Transportation, Transportation of Natural Gas and Other Gas by Pipeline; Minimum Safety Standards.
  - E. Section 306A of the Code of Iowa.

- F. The applicable policy, code, rule, regulation, law or whatever, which provides the highest degree of protection to the highway and to the public shall supersede all others.

### SECTION 3. CONDITIONS FOR OCCUPANCY OF RIGHT OF WAY

- 3-1 Design, Construction and Maintenance Requirements - All utility facilities permitted within the right of way under the jurisdiction of the Iowa Department of Transportation shall be designed, constructed, and maintained in accordance with the following rules:
- A. The utility company shall be responsible for the design of the utility facility to be installed within the highway rights-of-way or attached to a highway structure. The Department is responsible for review and concurrence of the utility's proposal with respect to the location of the utility facilities to be installed and the manner of attachment. This proposal shall include the measures to be taken to preserve the safe and free flow of traffic, structural integrity of the roadway or highway structures, ease of highway maintenance, appearance of the highway, and the integrity of the utility facility.
  - B. There shall be a minimum disruption of traffic; and other hazards to the highway user are to be minimized.
  - C. No utility facility shall be constructed so as to adversely affect the design, construction, operation, maintenance or stability of a highway or any proposed or existing highway facility.
  - D. A planted or landscaped area which is disturbed shall be restored as nearly as practical to its original condition. Specific authorization must be obtained from the engineer prior to trimming of trees or spraying within the right of way.
  - E. Ground-mounted utility facilities shall be of a design compatible with the visual quality of the specific highway section being traversed. (See Section 4 of this policy.)
  - F. Underground transverse crossings of existing roadways shall be made by untrenched construction whenever possible. Any variance must be specifically authorized by the engineer and noted in the permit.

On freeways, jacking pits shall not be permitted within the normal median or closer than 30' from the edge of pavement, or no closer than the toe of foreslope, whichever is greater.

Non-freeway highways, rural type, jacking pits shall not be permitted within the normal median or shall normally be no closer than the toe of foreslope or 30' from the edge of the pavement, whichever is less; however, jacking pits allowed within the foreslope shall be specifically authorized by the engineer and noted in the permit.

- On urban type non-freeway highways, jacking pits shall generally be no closer than 2' back of curb.
- G. Owners of utility facilities shall give the Engineer at least 48 hours notice, of intention to start construction within the highway right of way with the exception of service connections.
  - H. Owners of utility facilities shall at all times give the Engineer notice of intention to perform predictable routine maintenance within the highway right-of-way except service connections. (Telephone notification is sufficient.)
  - I. The utility company shall, for maintenance other than predictable routine, notify the Engineer as soon as possible of their activity on the highway right-of-way
  - J. The Department shall give the utility company at least 48 hours notice of any proposed construction or maintenance work that is likely to conflict with existing installations belonging to a utility company.
  - K. 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.

### 3-2 Access Requirements

- A. Access for servicing utility facilities located within the freeway right of way will, except in time of disaster emergency, be limited to:
  - 1. Frontage roads where provided.
  - 2. Intersecting, adjacent or nearby public roads and streets.
  - 3. Trails or auxiliary roads adjacent to or near the highway right-of-way which are connected to intersecting roads only.
  - 4. Private property.
- B. Access from the right-of-way may be permitted on non-freeway highways, subject to any limitations imposed by the permit, for maintenance of those lines occupying highway right-of-way.

### 3-3 Clear Zone

- A. On freeways open to traffic no personnel or equipment will be permitted within 30' of the edge of pavement or in the normal median during utility facility construction and maintenance operations, except for stringing of overhead conductors. In the interest of safety temporary poles in the median may be allowed during cable or conductor stringing operations if considered advisable by the Engineer.

- B. Non-Freeway highways, rural type, no permanent above ground obstructions will be permitted within the established clear zone or within the roadway slope limits, whichever is greater; right of way width permitting. For purposes of this policy Table 1 should be used to determine the appropriate clear zone distance in rural areas based on present day traffic and the foreslope existing adjacent to and preceding the utility appurtenance.

TRAFFIC VOLUME, ADT

Foreslope	under 800	800-2000	2000-6000	over 6000
3:1 or steeper	59	64	70	80
4:1	32	35	38	42
6:1	24	26	28	32
10:1	22	25	27	30

Clear Zone - Feet

TABLE I-

- C. In urban areas where curbed sections exist, utility poles should be located as far as possible from the traveled way. Optimum pole placement should be either at the right-of-way line or at a minimum clear zone distance of 10 feet.

SECTION 4. SCENIC ENHANCEMENT

The type and size of utility facilities and the manner and extent to which they are permitted along or within highway rights of way can materially alter the scenic quality, appearance, and view of highway roadsides and adjacent areas. For these reasons additional controls are applicable in certain areas that have been acquired or set aside for their scenic quality. Such areas include scenic strips, overlooks, rest areas, recreation areas, the rights of way of highways adjacent thereto, and the rights of way sections of highways which pass through public parks and historic sites.

New underground utility installations may be permitted within such land where they do not require extensive removal or alteration of trees or other natural features visible to the highway user or do not impair the visual quality of the lands being traversed.

New aerial installations shall be avoided at such locations where there is a feasible and prudent alternative to the use of such lands by the aerial facility. Where this is not the case, they may be considered by the engineer only where:

1. Other locations are unusually difficult and unreasonably costly, or are more undesirable from the standpoint of visual quality.
2. Underground is not technically feasible or is unreasonably costly.
3. The proposed installation can be made at a location and will employ suitable designs and materials which give adequate attention to the visual qualities of the area being transversed.

SECTION 5. LIABILITY

- 5-1 Where a relocation is to be made by the owner of a utility facility, the Department shall not be liable for the cost of any change, alteration, or betterment of such utility except as may be provided by law.
- 5-2 Where the Department is liable for costs of relocation required for highway work, the Department will not pay for any betterment that result in an increase in capacity of such related facilities, or other utility adjustments not required by highway construction. The Department is entitled to receive credit for accrued depreciation on replaced facilities and the salvage value of any material or parts salvaged and retained or sold by the owner.
- 5-3 The owner of the utility facility shall indemnify and save harmless the Department from any and all causes of action, suits at law or in equity, or losses, damages, claims, or demands, and from any and all liability and expense of whatsoever nature for, on account of, or due to the acts or omissions of said owners' officers, members, agents, representatives, employees, contractors or assigns arising out of or in connection with its (or their) use or occupancy of the public highway under a permit or agreement.

SECTION 6. RESPONSIBILITY FOR CONSTRUCTION

- 6-1 Where utility facilities occupying the rights of way require relocation or protection because of highway improvements or construction, said relocation shall be performed without cost to the state by the owners in advance of the highway work whenever possible.
- 6-2 The Engineer shall have authority to decide any questions that arise in reference to the intent of the agreement or permit documents and the compliance therewith, relative to the condition of the highway.
- 6-3 The Engineer shall have the right to approve minor alterations in plans or character of the work, as related to the highway, which may be considered necessary or desirable during the progress of the work to complete satisfactorily the proposed construction. Such alterations shall not be considered as a waiver of any of the conditions of the agreement or permit nor invalidate any of the provisions thereof.
- 6-4 The Department may appoint inspectors to represent the Engineer in the inspection of all construction, as related to the highway, done within the right of way as part of the agreement or permit. The inspector(s) will not be permitted to modify in any way the provisions of the agreement or permit nor to delay the work by failing to inspect the work with reasonable promptness. An inspector is placed on the job to keep the Engineer informed as to the progress and manner in which it is being done; also to call the utility company's attention to any infringements of the agreements or permit documents. The inspector will not act as a foreman nor perform other duties for the utility company or their



contractor nor improperly interfere with the management of the work. He will not be authorized to approve or accept any portion of the work. The utility company or their contractor shall furnish the Engineer with every reasonable facility for ascertaining whether the work is being performed in accordance with the agreement or permit documents.

- 6-5 The utility owner of the facility and its contractor shall be responsible for the care and maintenance of their partially completed work on the right-of-way.
- 6-6 If, prior to final inspection, any repairs to the right of way are made necessary by the construction or maintenance of a utility facility, the owner shall upon notification immediately make the necessary repairs.
- 6-7 Before final inspection of the condition of the highway, the utility facility owner shall be responsible to remove all unused material or rubbish, resulting from the operation, from the site of the work, and leave the right of way in a clean, presentable condition.
- 6-8 Upon notification by the utility facility owner or its authorized representative that the work is completed, the Engineer shall make a prompt inspection of each item of work included in the agreement or permit related to the condition of the highway. If the work is found to be not in accordance with the agreement or permit documents, the utility company will be required to remedy the particular defects found. When the condition of the highway is found acceptable, the utility facility owner shall be so notified by the Engineer. All notices required in this paragraph shall be in writing.

## SECTION 7. CONSTRUCTION METHODS & PROCEDURES

### 7-1 General

- A. All work within the right of way shall be executed in a satisfactory and workmen-like manner in accordance with good construction practices.
- B. All work shall be accomplished in such a manner as to cause a minimum of disturbance to any other contractor working in the right of way.
- C. No person, corporation, or utility, shall spray, trim, cut down, root up, remove, cut or mutilate in any manner, any tree, shrub, bush or vine situated upon any portion of the right of way of any highway on the primary road system, without specific written authorization by the Department.
- D. In the performance of the agreement or permit the owner of the utility facility shall comply with the Manual on Uniform Traffic Control Devices and all applicable federal, state and local laws and regulations governing safety, health and sanitation. The owner or its contractor shall furnish such additional safeguards, safety devices and protective equipment and shall take such actions as is reasonably necessary to protect the life and health of the public.

7-2 Backfilling Trenched Construction

- A. Where a carrier, pipe, conduit, duct, or cable is placed by trenched construction beneath a roadway or a driveway or within five feet of the edge of an existing or proposed pavement or base course, the backfill within the roadway shall be placed and compacted in no more than 6" lifts, from the top of the installation to the ground line. The backfill shall be of suitable material free from boulders, frozen clods or roots or excessive sod or other vegetation. The fill shall be carefully hand tamped under and around the installation in lifts not to exceed 4" in loose thickness.
- B. In areas inaccessible to tamping type rollers where compaction is required, a mechanical tamper of a size suitable for the work involved shall be used.
- C. Pneumatic tampers shall be operated at pressures no less than those recommended by the manufacturer.
- D. Compaction of backfill shall be to the satisfaction of the Engineer, and consistent with good highway construction methods.

7-3 Untrenched Construction Methods - When untrenched construction techniques are utilized the bore shall be as small as possible and in no case more than 4 inches larger than the facility or casing inserted. Grout or sand backfill is required for unused holes, and for abandoned pipes over 3" in diameter. Backfill is also required for bore holes in excess of 2" oversize in diameter of the facility or casing inserted.

SECTION 8 TRAFFIC PROTECTION

- 8-1 The utility facility owner or its contractor shall be responsible for installing warning signs, protective devices and flagmen, when necessary, meeting the Department's requirements for protection of the traveling public and the utilities' workers when performing any work on the right of way.
- 8-2 The Department will furnish all signs for work on Primary Roads and Freeways necessary to conduct traffic through the construction or repair area unless otherwise provided for in the permit; however, the owner of utility facility may elect to use its own signs conforming to the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways. Department owned signs will be made available to the utility facility owner or its contractor at one of the major Department maintenance facilities. The owner of the utility facility is responsible for the original placing of the signs, removal after the work has been completed, and return of the Department owned signs to the Department maintenance facility from which obtained. The utility facility owner or its contractor shall be responsible for correctly using signs as needed while work is in progress. Signs lost, damaged or destroyed shall be replaced or paid for by the owner of the utility facility.

8-3 Utility work may be divided into three classifications; emergency, maintenance, and new construction. The guidelines for traffic control listed here are for normal situations and additional protection should be provided when special complexities and hazards exists.

A. Emergency Work

1. Can occur at any time of day or night.
2. May be caused by storm damage.
3. May involve customers disruptions of utility service.
4. Work operation usually involves a small crew and a work vehicle for a short period of time.
5. The work vehicle should be equipped with a yellow flashing light, a limited number of portable signs and channelizing devices in good condition, and equipment for flaggers in the event they are needed.
6. The extent of traffic control may be less than longer term construction or maintenance, yet the safety of pedestrians, motorists, and workers should be provided.

B. Maintenance and New Construction for Utilities

1. The public will not easily make a distinction between maintenance and new construction so the type of traffic control used should be adequate for the nature, location, and duration of work, type of roadway, traffic volume and speed, and potential hazard. New construction and some maintenance activities are planned (as opposed to emergency activities) so these guidelines should be followed.
  - a. In urban areas, consider avoiding the hours of peak traffic when scheduling work.
  - b. Maintain street and road work areas for only as long as is necessary to safely move in, finish the work, remove all utility work signs and move out.
  - c. Take special care to clearly mark suitable boundaries for the work space with channelizing devices so pedestrians and drivers can see the work space. If any of the traveled lanes are closed, tapers shall be used as required by the MUTCD.
  - d. Pedestrians should not be expected to walk on a path which is inferior to the previous path. Loose dirt, mud, broken concrete, or steep slopes may force pedestrians to walk on the roadway rather than the sidewalk. Repairs (temporary or permanent) to damaged sidewalks should be made quickly. This may include bridging with steel plates or good quality wood supports.
  - e. Any work which cannot be completed during the day and impedes traffic or presents a hazard overnight may need

additional attention. Reflectorized signs and channelizing devices are required by the MUTCD. Warning lights are optional but should be considered.

- f. Any member of the crew who serves as a flagger should be equipped with a red flag or a STOP-SLOW paddle, a reflective vest, and be trained for proper flagging procedures.
- g. Work areas involving excavations on the roadway generally should not exceed the width of one traffic lane at a time. The work should be staged and, if needed, approved bridging should be utilized. This type of activity should be fully coordinated with the traffic or public works department having jurisdiction over the street or highway.

### C. Traffic Control

1. Despite the shortness of "short-term" operations, certain traffic controls are necessary and should be used.
2. In urban areas, the work vehicle may be used to supplement the normal signing if it is equipped with flashing lights, rotating beacons, or flags.
3. The placement of signs, barricades, and channelizing devices shall be in accordance with MUTCD and current Department specifications for traffic control for street and highway construction and maintenance operations.
4. Flaggers shall be provided at work sites to stop traffic intermittently as necessitated by work progress or to maintain continuous traffic past a work site at reduced speeds to help protect the work crew. For both of these functions the flagger must, at all times, be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed before entering the work site. In positioning flaggers consideration must be given to maintaining color contrast between the work area background and the flagger's protective garments. Flagging shall be conducted in accordance with the MUTCD.

## SECTION 9. APPLICATIONS AND PERMITS

- 9-1 Where a utility facility, not covered by an agreement with the Department, is to be placed, adjusted, improved, relocated or replaced across or along an existing highway or a highway under construction, the owner of the utility facility shall initiate arrangements by submitting a permit application for installation and maintenance of the utility facility to the appropriate Resident Maintenance Engineer, excepting service connections within incorporated municipalities.

A new permit is required at any time there is a change in the class of transmittant, an increase in the maximum design pressure shown on the permit, or any other physical change in the utility facility.

- 9-2 Each permit application shall contain a plan submittal showing the location of the utility by section, township, range and mile posts within the highway right of way limits noting all construction details such as depths, types of material, operating pressures, voltages, vertical and horizontal clearance.
- 9-3 Applications for placing utility facilities, in, on, above or below the National System of Interstate and Defense Highways require the approval of the Federal Highway Administration. Applications for placing utility facilities which will discharge material into the Nation's waters must be accompanied by satisfactory evidence of compliance with all applicable requirements of Federal, State or local environmental protection agencies prior to their approval.
- 9-4 The owner of the utility facility or its contractor shall have a copy of the approved permit or agreement on the job site at all times for examination by highway officials.
- 9-5 The permit is subject to all the applicable rules and regulations of the Department, other State departments, and the Code of Iowa.
- 9-6 All utilities occupying or crossing the highway right of way shall be covered by a permit or agreement, except for service connections on non-freeway highways within incorporated municipalities.
- 9-7 A properly executed agreement shall be considered to be a permit.
- 9-8 Any permit required for a utility facility which is to be located within the corporation limits of a municipality will require the approval of both the municipality and the State.
- 9-9 Permits covering gas or water mains outside the corporate limits of a municipality shall be renewed every 20 years.

#### SECTION 10. NON-COMPLIANCE

- 10-1 Non-compliance with any of the terms of the Department's policy, permit, or agreement, may be considered cause for shut-down of operations or withholding of relocation reimbursement until compliance is assured, or revocation of the permit. The cost of the work caused to be performed by the Department in removal or non-complying construction will be assessed against the owner of the utility facility.

#### SECTION 11. TRANSVERSE UTILITY FACILITY OCCUPANCY

- 11-1 Public utility facilities shall be granted permission to cross any state highway. Private utility facilities may be permitted to cross state

highways. All such utility occupancy shall be subject to the provisions of Section 3 (Conditions for Occupancy of Right of Way) and other requirements as stated herein.

11-2 The number of crossings of such utility facilities shall be kept to a minimum. Consideration should be given to installing distribution facilities on each side of the highway to avoid numerous crossings and service connections in a relatively short distance. Where feasible, several facilities should cross in a single conduit or structure. To the extent practical, crossings should be approximately perpendicular to the highway alignment.

11-3 On both cased or uncased installations, particularly on crossing of the highway, consideration shall be given for placing spare conduit or duct to accommodate known or planned expansion of underground lines.

11-4 Freeways

A. Overhead or underground utility facility installations will not be permitted within directional interchanges (intersecting freeway) unless highway related.

B. At interchanges, where it is determined that utility facilities, either underground or overhead, cannot be reasonably placed and maintained from the intersecting road, the utility facilities shall be constructed around the interchange on private property to a point of crossing.

C. Underground Installations shall be located as provided in Sections 14, 15 and 16.

D. Overhead Installations

1. In general, poles, guys and other supporting structures and related ground utility facilities shall be located outside the freeway right of way. A single span shall be used to cross the freeway where the width of freeway right of way permits.

2. Overhead utility facility occupancy of the right of way at freeway interchanges or locations of grade separations may be considered if in compliance with the following conditions:

(a) Access to the utility facility shall be obtained from other than the freeway, its ramps or loops.

(b) Single pole construction shall be used with the number of poles kept to a minimum.

(c) Overhead lines will be constructed on tangent, parallel to the intersecting road, without guys or anchors placed in the areas between the ramps and main roadways of the freeway. Guy poles shall be located as near the freeway right of way line as possible.

- (d) Poles shall be located as close to the slope limits of the intersecting road as possible, but shall remain outside the clear roadside recovery area.
- (e) Poles shall be located as far from the main roadways and ramps of the freeway as possible. No poles will be permitted within the median, or within the clear roadside recovery area along the ramp pavement and the freeway pavement.
- (f) Where crossing of overhead (aerial) utility facilities are allowed, self-supporting poles or towers, double arming and insulators, and/or dead-end construction should be considered.

11-5 Non-Freeway Access Highway

A. Underground Installations

- 1. Transverse underground utility facilities are to be located and encased as provided in Sections 14, 15, and 16.
- 2. Waterlines 2" or less inside diameter shall be copper, lead, ABS plastic ASTM 1527, or PVC pipe ASTM 1785, or equal and need not be encased.

B. Overhead Installations

- 1. In rural areas, overhead utility facilities are to be located with poles, guys or other supporting structures and related ground mounted facilities as near as possible to the right of way line, but in no event shall they be placed within the clear roadside recovery area or the roadway slope limits, whichever is greater, right of way widths permitting.
  - (a) Where crossing of overhead (aerial) utility facilities are allowed, self-supporting poles or towers, double arming and insulators, and/or dead-end construction should be considered.
- 2. In suburban areas, with rural type highways and speeds 45 MPH or lower, utility poles shall be located at least fifteen (15) feet from the edge of the paved traveled way or beyond the roadway slope limits, whichever is greater, with the preferred location being near the right of way line.
- 3. In urban areas with curbed pavement, utility poles shall be placed at the right of way line or at a minimum clear zone distance of 10 feet from the edge of traveled way. Exceptions to this placement policy will be considered on an individual basis.
  - (a) In general, ground anchors or stub poles shall not be placed between a pole and the pavement.

4. Poles, guys, anchors, or other appurtenances shall not be located in ditches, at drainage structure openings, or on roadway shoulders. All poles, guys or other appurtenances shall be located to minimize interference with maintenance operations of the Department.
5. Consideration will be given to adjusting minimum setback distances for poles or other appurtenances meeting minimum AASHTO breakway criteria if approved by the Engineer.

## SECTION 12. LONGITUDINAL UTILITY FACILITY OCCUPANCY

12-1 Where allowed, longitudinal installations should be located on uniform alignment as near as practicable to the right of way line so as to provide a safe environment for traffic operation and preserve space for future highway improvements or other utility installations.

### 12-2 Freeway

- A. New utilities will not be permitted to be installed longitudinally within the control of access lines of any freeway, except that in special cases such installations may be permitted under strictly controlled conditions. However, in each such case the utility owner must show that:
  1. The accommodation will not adversely affect the safety, design, construction, operation, maintenance or stability of the freeway;
  2. The accommodation will not be constructed and/or serviced by direct access from the thru traffic roadways or connecting ramps;
  3. The accommodation will not interfere with or impair the present use or future expansion of the freeway; and,
  4. Any alternative location would be contrary to the public interest. This determination would include an evaluation of the direct and indirect environmental and economic effects which would result from the disapproval of the use of such right of way for the accommodation of such utility.
- B. In those special cases when longitudinally occupancy is allowed, the utility shall be located on uniform alignment as near the right of way line as possible and preferably within eight feet of the right of way line so as to provide a safe environment for traffic operations and to preserve space for future highway improvements or other utility installations.
  1. In all cases, utilities shall be located where they can be installed, serviced or maintained without access from through-traffic roadways or ramps.



- C. Occupancy will be allowed to utilities required to service highway related facilities.
- D. Where a utility already exists within the proposed right of way of a freeway and it can be serviced, maintained and operated without access from the through traffic roadways or ramps, it may remain as long as it does not adversely affect the safety, design, construction operation, maintenance or stability of the freeway.
  - 1. If the existing utility does affect the freeway as stated in the above, the utility must be relocated.

12-3 Non-Freeway Access Highway

A. Underground Installations

- 1. With the exception of natural gas distribution systems, the carriers of transmittants which are flammable, corrosive, expansive or unstable, particularly if carried at high pressure, may not be placed longitudinally with the highway within the right of way limits.
- 2. In rural areas, underground utility facilities are to be placed not nearer the roadway than the slope limits, right of way width permitting, except at locations where this is not acceptable, such as deep ravines or ditches. A decision as to what is acceptable shall be determined by the Engineer.
- 3. In urban type areas, longitudinal occupancy for proposed utility facilities are to be as near the highway right of way line as possible and preferably not to be located within the traveled way. Manholes placed within the right of way shall not protrude above the surrounding surface.
- 4. In general, utility facilities will not be permitted in the median except for underground transverse crossings. Consideration may be given in special cases; however the decision shall be determined by the Engineer.

B. Overhead Installations

- 1. In rural areas, overhead utility facilities are to be located with poles, guys or other supporting structures and related ground mounted facilities as near as possible to the right of way line, but in no event shall they be placed within the clear roadside recovery area or the roadway slope limits, whichever is greater, right of way widths permitting.
  - (a) Where crossings of overhead (aerial) utility facilities are allowed, self-supporting poles or towers, double arming and insulators, and/or dead-end construction should be considered.

2. In suburban areas, with rural type highways and speeds 45 MPH or lower, utility poles shall be located at least fifteen (15) feet from the edge of the paved traveled way or beyond the roadway slope limits, whichever is greater, with the preferred location being near the right of way line.
3. In urban areas with curbed pavement, utility poles shall be placed at the right of way line or at a minimum clear zone distance of 10 feet from the edge of traveled way. Exceptions to this placement policy will be considered on an individual basis.
  - (a) In general, ground anchors or stub poles shall not be placed between a pole and the pavement.
4. Poles, guys, anchors, or other appurtenances shall not be located in ditches, at drainage structure openings, or on roadway shoulders. All poles, guys or other appurtenances shall be located to minimize interference with maintenance operations of the Department.
5. Consideration will be given to adjusting minimum setback distances for poles or other appurtenances meeting minimum AASHTO breakway criteria if approved by the Engineer.

### SECTION 13. VERTICAL OVERHEAD CLEARANCE

The vertical clearance for overhead utility facilities above all highways and the lateral and vertical clearances from bridges, shall conform with the National Electrical Safety Code, except where greater clearances are required by State law, regulation or policy. In no event shall such vertical clearance be less than 20' above the pavement, except for service connections where the minimum vertical clearance shall be 18' above the pavement.

### SECTION 14. UNDERGROUND DEPTH REQUIREMENTS

14-1 Measurement - The cover is measured as follows:

- A. From the ultimate pavement surface edge except that on a curve, is measured to the lowest pavement surface edge.
- B. When there are curbs and gutters, from the gutter flow line, excluding the local depressions at inlets.
- C. The top of curb where installation is to be behind the curb.

14-2 Minimum Cover

- A. The minimum cover under a roadway shall be 48" or such greater depth as may be required to clear the pavement structure. The minimum cover in other portions of the right of way shall be 48" for electric cables, 30" for communication cables, and 36" for all other

underground facilities. In critical situations where the necessary cover cannot be obtained, other protective measures may be approved.

- B. In urban sections where the necessary cover cannot be obtained, a lesser depth requirement may be considered.

#### SECTION 15. LOCATION OF APPURTENANCES

- 15-1 Freeways - Unless otherwise provided, all appurtenances shall be located outside the right-of-way.
- 15-2 Non-Freeway Access Highway (Rural Type) - In general, all appurtenances shall be located at or as near the right-of-way line as possible.
- 15-3 Non-Freeway Access Highway (Urban Type) - In general, appurtenances should be located outside the pavement as near the right of way line as possible. Manholes for existing facilities may be incorporated in the pavement where it is not practicable to relocate the existing utility facility.

#### SECTION 16. ENCASEMENT

- 16-1 Casings shall be an oversized load bearing conduit, duct or gallery through which a utility is inserted:
  - A. To protect the roadway from damages and to provide for repair, removal and replacement of the utility without interference to highway traffic.
  - B. To protect the carrier pipe from external loads or shock, either during or after construction of the highway.
  - C. To convey 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.
  - D. The casing shall include necessary appurtenances, such as vents, drains, and markers. Casing pipe shall be sealed at both ends with a suitable material to prevent water or debris from entering the annular space between the casing and the carrier, in accordance with Pipeline Industry Standards.
- 16-2 Utility lines crossing highway rights-of-way will, in general, require casing from right-of-way line to right-of-way line. In certain instances, minimum casing may be allowed, requiring encasing from toe of slope to toe of slope.
- 16-3 Utility lines installed parallel to highway rights-of-way require casing at certain locations. Such locations include, but are not limited to, crossings of side roads and major entrances.

16-4 CASED LINES (AND WAIVER OF CASING)

- A. Underground electric service must be placed in conduit or ducts from right-of-way line to right of way line and must be clearly marked by the owner at the outer limits of the right-of-way.
- B. Lines carrying high pressure natural gas, liquid petroleum products, ammonia, chlorine, or other hazardous or corrosive products need not be cased provided they are:
  - 1. Welded steel pipelines
  - 2. Cathodically protected
  - 3. Coated in accordance with accepted Industry Standards
  - 4. Meet the requirements of American National Standards Institute B31.4 (Liquid Petroleum Transportation Piping Systems) or 31.8 (Gas Transmission and Distribution Piping Systems) with respect to wall thickness.
  - 5. Designed for operating stress levels in accordance with Federal Pipeline Safety Regulations.
- C. The utility company will provide, as a part of the permit, a statement of certification that the conditions and provisions contained in items (1) through (5) above will be complied with when requesting a waiver of casing.
- D. Such lines not meeting conditions and provisions (1) through (5) above must be cased within the right-of-way limits and shall be vented and marked at the outer right-of-way limits. The markers shall give the name and address of the owner and phone number to contact in case of an emergency.
- E. Sanitary sewer lines must be encased from right-of-way line to right-of-way line, except cast or ductile iron gravity flow lines, placed prior to highway construction and properly bedded, may be installed without casing, provided that heavy duty cast or ductile iron pipe is used within the highway construction limits and that suitable mechanical joints and seals are used.
- F. Water lines must be cased, from toe of slope to toe of slope. Venting and sealing of casement is not required. Casement is not required provided:
  - 1. Such line is placed prior to highway construction utilizing extra strength cast iron or ductile iron with mechanical joints and seals, and is properly bedded. The extra strength pipe is to be used from right-of-way line to right-of-way line.
  - 2. Any copper, steel, or plastic waterline with an inside diameter of two (2) inches or less.
  - 3. All plastic pipe with inside diameter greater than two (2) inches must be encased from right-of-way line to right-of-way line and meet minimum ASTM specifications and all applicable laws and codes. In certain instances, minimum casing may be allowed requiring encasing from toe of slope to toe of slope.

- G. An underground utility facility shall be entirely encased through any area which has access available only from a freeway, its ramps or loops.
- H. In no case shall an encasement extend less than 30 feet outside the roadway or 6 feet beyond the foreslope limits whichever is greater, right of way width permitting.

#### 16-5 UNCASED LINES

- A. The following type utility lines will not require encasement:
  - 1. Natural gas distribution and service lines with maximum pressure of 30 pounds per square inch (PSI) of copper, steel or plastic which have an inside diameter of two (2) inches or less. Such lines are to be protected and installed in accordance with industry requirements and standards. The permit is to include a statement of certification that such standards will be met.
  - 2. Direct buried telephone and communications cable.
  - 3. Welded steel lines which are coated and cathodically protected and meet other requirements noted in previous Section 16-4, B.
  - 4. Water lines of two (2) inches or less inside diameter, of copper, steel, or plastic.
- B. Uncased utility installations, which by reason of shallow depth or location make them vulnerable to damage from highway construction or maintenance operations, shall be protected with a casing, suitable bridging, concrete slabs or other appropriate measures.
- C. Where it is acceptable to both the utility company and the Department, underground utility installations not listed in this section may be installed without protective casing. These will be determined on an individual basis and limited to:
  - 1. Open trenched construction
  - 2. Small bores

#### 16-6 BORING

- A. Pits for boring, tunneling or jacking will not be permitted in the highway median and will not be permitted closer to the roadway than toe of fill in fill sections or toe of shoulder slope in ditch sections when allowed on the right-of-way.
- B. Casing and pipeline installations shall be accomplished by dry boring, tunneling, jacking, trenching, or other approved methods.
  - 1. The use of water under pressure (jetting) or puddling will not be permitted to facilitate boring, pushing, or jacking

operations. Some boring may require water to lubricate cutter and pipe and under such conditions, is considered dry boring.

2. Where unstable soil conditions exist, boring or tunneling operations shall be conducted in such a manner as not to be detrimental to the roadside being crossed.
  3. If excessive voids or too large a bored hole is produced during casing or pipeline installations, or if it is necessary to abandon a bored or tunneled hole, prompt remedial action shall be taken by the utility company, subject to the approval of an authorized representative of the Department.
  4. All voids or abandoned holes by boring or jacking shall be filled by pressure grouting when deemed necessary by the Department. The grout material shall be a sand cement slurry with a minimum of two (2) sacks of cement per cubic yard and a minimum of water to assure satisfactory placement.
- C. Bored or tunneled installations shall have a hole diameter which shall not exceed the outside diameter of the utility pipe, cable or casing (including coating) by more than one and one-half (1 1/2) inches on pipes with an inside diameter of twelve (12) inches or less or two (2) inches on pipes with an inside diameter greater than twelve (12) inches.

#### 16-7 CASING MATERIAL

A. The following materials are acceptable for use in the casing of utility facilities:

1. Welded steel pipe, smooth wall, in sound condition with a minimum wall thickness as specified in American Petroleum Institute Code #1102 listed below:

<u>Casing Diameter</u>	<u>Minimum Wall Thickness</u>
6", 8", 10", 12", 14" & 16"	.188" - 3/16"
18", 20", 22"	.250" - 1/4"
24" & 26"	.281" - 9/32"
28", 30", 32" & 34"	.312" - 5/16"
36", 38", 40" & 48"	.344" - 11/32"
Casing Diameter Under 6"	Standard wall pipe or .188" wall, as preferred

2. Cast iron pipe or ductile iron of the same class as used for carrier pipe, providing it meets the minimum ASTM Specifications. A statement certifying that such specifications are met will be submitted as part of the permit.
3. Polyvinyl Chloride (PVC) and Chlorinated Polyvinyl Chloride (CPVC) providing it meets the minimum ASTM Specifications and all applicable laws and codes. PVC, Types PSP and PSM sewer pipe, ASTM specifications D 3033 and D 3034 respectively to be in accordance with the listing below:

TYPE PSP AND PSM PIPE DIMENSIONS

<u>Casing Diameter</u>	<u>Minimum Wall Thickness</u>	
	<u>PSP</u>	<u>PSM</u>
4"	.120"	.120"
6"	.253"	.153"
8"	.199"	.205"
9"	.230"	.230"
10"	.249"	.256"
12"	.299"	.305"

The use of PVC pipe for casing is acceptable up to a maximum diameter of 12 inches.

4. Electric conduits may be of non-metallic materials such as polyvinyl chloride, transite or vitrified clay.

SECTION 17. UTILITY FACILITY ATTACHMENTS TO BRIDGES

17-1 Electrical Power and Communication Cables Attachments:

- A. Proposals for placing any electrical power or communication cable on or near bridges, whether existing or planned, or whether on rural or urban roadways, must be approved by the Department, prior to the issuance of a permit. The application shall include a detailed sketch showing method of attachment and weights of attachment. A separate permit shall be filed for each bridge.
- B. All attachments shall be in conduits, pipes, or trays and shall be above low steel or masonry of the structure and not attached to the structural steel. Expansion devices will be required. Cables in cell or casing shall be grounded wherever necessary. Carrier pipe shall be suitable insulated from electric power line attachments.
- C. New structures may be designed to accommodate electrical power and communication lines if the attachment is determined to be in the best interest of the public. All cost attributed to the installation of the line shall be paid by the utility unless such attachments are made as a part of or in lieu of utility relocation costs.
- D. Electrical power and communication lines may be attached to existing structures if it is determined by the Department to be in the best interest of the public.
  1. Welding or drilling holes in structural steel primary members shall be prohibited.
  2. Utilities may be attached to noncritical concrete areas.

3. Holes generally shall not be cut in wing walls, abutments, or piers.

E. Fees charged for structure attachments shall be as follows:

1. Telephone open wire lines, cables, conduits, and multiple cell conduits may be allowed to be attached to bridges. The fee for such attachment shall be a permit fee of \$50 plus 30¢ per pound weight per foot of utility facility for each foot of the bridge length.
2. Power lines may be allowed to be attached to a bridge structure. The fee for such attachment shall be the same as for telephone lines in (1) above.
3. \$50.00 per bridge + (\$0.30 x weight of attachment in pounds per foot x length of bridges in feet) = FEE.

17.2 Water Mains, Sewer and Steam Line Attachments:

- A. Water mains, sewer and steam lines belonging to a municipality or a private company serving the municipality may, if the Department considers it desirable, be attached to the bridge structure, at no cost.
- B. Attachments procedures shall be the same as outlined in Section 17-1.

17-3 Pipeline Attachments:

- A. Pipelines shall include gas, petroleum products, chemicals, and water mains, sewer and steam lines not covered in section 17.2.
- B. Pipelines may be attached to bridge structures when installation below ground is not feasible. All pipelines attached to structures shall be placed in a neat manner. When permitted, by space available and design of the bridge, pipes shall be placed beneath the structure's floor, inside of the outer girders or beams (or in cells specifically designed for the installation), and be above low steel or masonry of the structure. Piping shall be designed to withstand expected expansion or contraction forces and, if necessary, expansion devices such as expansion joints, offsets or loops shall be used. Pipelines in cell or casing shall be vented and grounded whenever necessary. Pipelines attached to structures having more than 75 PSI operating pressure or larger than two inches in diameter shall have shut offs not more than 300 feet from each end of the bridge. Casing requirements will be judged on an individual basis. In some instances, thicker walled or extra strength pipe may be considered in lieu of encasement.
  1. Welding or drilling holes in structural steel primary members shall be prohibited.
  2. Utilities may be attached to noncritical concrete areas.



3. Holes generally shall not be cut in wing walls, abutments, or piers.
- C. A lump sum payment is made to the Department as compensation for attaching pipe lines to bridges consisting of a \$50 permit fee per bridge in addition to the following:
  - 2" gas main at \$1.50 per foot length of bridge
  - 3" gas main at \$3.00 per foot length of bridge
  - 4" gas main at \$4.50 per foot length of bridge
  - 5" gas main at \$6.25 per foot length of bridge
  - 6" gas main at \$8.50 per foot length of bridge
  - 7" gas main at \$10.75 per foot length of bridge
  - 8" gas main at \$13.00 per foot length of bridge

For other sizes than given above the rate shall be based on 30¢ per pound foot of pipe for each foot of bridge length.

- D. The owner of the utility facility shall provide an indemnity bond to be executed either by itself or by a responsible bonding company, at the Department's option, in an amount equal to twice the replacement cost of the bridge. The indemnitor under such bond shall, in the event of damage to the bridge from the explosion of or fire from the gas pipeline attached to such bridge resulting from any cause whatsoever, except the sole negligence of the employees of the Department, indemnify the Department against all loss or damage to it or any third party therefrom, including but not limited to the expense of repairing or replacing the bridge and the cost of alternate highway facilities for traffic during the period of such bridge repair or replacement. Such indemnify bond shall be kept in full force and effect as long as the gas pipeline is attached to such highway bridge. The amount of bond may be reviewed by the Department and adjustments required to reflect changes in construction costs.
- E. The method of attachment and the replacement of the pipeline must have the approval of the Department, and the applicant shall agree to all applicable conditions and stipulations.

#### 17-4. Utility Facilities on Proposed New Structures

- A. Owners of utility facilities proposing to place utility facilities on structures that are in the planning stage will pay in advance an installation fee (additional cost occasioned by the increased design time, inspection and strength of the bridge) and a permit fee (for the attachment weight) in accordance with the fees set out above in sections 17.1, 17.2 and 17.3.
- B. The permit fee is to be paid in advance and the installation fee will be billed to the utility company involved when the work is completed.

- C. A permit allowing a utility facility owner the privilege to attach its facilities to a highway structure does not constitute any permanent right for such attachment. The removal, remodeling or relocation of the attachment shall be accomplished by the utility facility owner promptly and at no cost to the State, when so required by the State.
- D. Unless specifically authorized by the Department maintenance of the attachment will not be performed from the roadway.

#### SECTION 18. PRIVATELY OWNED UTILITY FACILITIES

18-1 Privately owned utility facilities shall be accommodated in accordance with the provisions of this policy with the following possible exceptions.

- A. The cover requirement of Section 14 may be waived for tile lines and sewer lines where necessary, and at the discretion of the Engineer.
- B. The original placement and removal of signs required in Section 8 may be accomplished by Department personnel, at the discretion of the Engineer.

