

OFFICE OF STATE AID ROAD CONSTRUCTION			S.O.P. NO. SA II-2-8
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Subject: S.O.P. ACCOMMODATION OF UTILITIES ON RIGHTS-OF-WAY			Distribution A, B, C, D, E
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PURPOSE: To State The Policy of State Aid To Regulate The Installation And/Or Adjustment Of Utility Facilities Within The Rights-Of-Way Of The County-Federal And State Aid Systems.

GENERAL: The County has the responsibility to maintain its highway rights-of-way in such a manner as will preserve the integrity, safety, and function of the highway facilities. Since the manner in which utilities cross or otherwise occupy highway rights-of-way can affect the appearance, safety, and maintenance of the highway, it is necessary that such use and occupancy be authorized and reasonably regulated.

1. **APPLICATION:**

This policy applies to all public and private utilities, including electric power, telephone, telegraph, water, gas, oil, petroleum products, steam, chemicals, sewage, drainage, irrigation, and similar lines, that are to be accommodated, adjusted, or relocated within the rights-of-way on the County-Federal Aid and State Aid Systems. The Board at its discretion may apply this Policy to those County roads not on the Federal Aid and State Aid Systems. Such utilities may involve underground or overhead facilities, either singularly or in combination.

2. **SCOPE:**

This policy provides for regulating the future location, design, and method of installing, adjusting, and maintaining utilities within the rights-of-way of the County-Federal Aid and State Aid Systems. It does not alter those regulations governing the location, relocation and/or adjustment of utility facilities previously authorized by the Boards of Supervisors; nor does it determine the financial responsibilities of the County and the utilities involved. It is limited to matters which are the responsibility of the office of State Aid Road Construction and the Boards of Supervisors for preserving the integrity of roads and their safe usage.

3. **DEFINITION OF TERMS:**

The following terms contained in this Policy or in related and supplemental documents, instruments and/or permits shall be interpreted as follows:

APPLICANT: Any utility company, association or individual receiving a permit from the County Board of Supervisors to locate, relocate, adjust and maintain its utility facilities within the County highway rights-of-way.

BACKFILL: The replacement of soil around and over a pipe or conduit.

BEDDING: The organization of soil to support a pipe.

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BOARD: The Board of Supervisors of the individual County.

BOND: The approved form of security furnished by the applicant and its surety, if required, as a guaranty of good faith and ability on the part of the applicant to execute the work and maintenance in accordance with the terms of the permit and these specifications.

BURY: Depth of the top of utility line below the grade of roadway or ditch.

CAP: Rigid structural element surmounting a pipe.

CARRIER: A pipe directly enclosing a transmitted fluid (liquid or gas).

CASING: A larger pipe enclosing a carrier pipe.

CLEAR ZONE POLICY: The policy employed by highway authorities 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 practicable and to eliminate physical obstructions above the ground, such as trees, drainage structures, sign supports, utility poles, and other ground-mounted obstructions.

COATING: Material applied to or wrapped around a pipe.

CONDUIT OR DUCT: An enclosed tubular runway for protecting wires or cables.

CONVENTIONAL HIGHWAY: An arterial highway without access control.

COUNTY: That area of land, designated by law, under the jurisdiction of the County Board of Supervisors

CRADLE: Rigid structural element below and supporting a pipe.

CROWN: The vertical rise between the edge of the road (shoulder line) and the center of the road.

CROWN WIDTH: The horizontal distance between the shoulder lines of the road.

DIRECT BURIAL: Installing a utility facility underground without encasement.

DRAIN: Appurtenance to discharge liquid contaminants from casings.

ENCASEMENTS: Structural element surrounding a pipe.

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ENCROACHMENT: Authorized or unauthorized use of highway right-of-way or easements, such as signs, fences, buildings, etc.

ENGINEER: The County Engineer employed by the County Board of Supervisors in accordance with law and acting under the rules and regulations of this Policy and the approval of the State Aid Engineer.

FLEXIBLE PIPE: A plastic, fiberglass or metallic pipe having large ratio of diameter to wall thickness which can be deformed without undue stress.

GALLERY: An underpass for two or more pipelines.

GROUNDING: Connected to earth or to some extended conducting body which serves instead of the earth, whether the connection is intentional or accidental.

GROUT: A cement mortar or slurry of fine sand or clay, as conditions govern.

HIGHWAY, STREET OR ROAD: A general term denoting a public way for the purpose of vehicular travel, including the entire area within the right-of-way.

JACKET: Encasement by concrete poured around a pipe.

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

MATERIALS: Any specified substance, manufactured items or raw materials used in the utility facility construction.

MEDIAN: The portion of a divided highway separating the traveled way for traffic in opposite directions.

NORMAL: Crossing at a right angle.

OBLIQUE: Crossing at an acute angle.

OVERFILL: Backfill above a drainage structure above natural ground.

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

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PERMIT: The permission, in written form, issued by the Board through its authorized representative to the applicant to proceed with the utility facility location, relocation, and/or adjustment within the highway rights-of-way under the provisions of this Policy.

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.

PLANS: The proposal of the applicant to do certain utility work within a highway right-of-way, including working drawings showing the location, character of work, dimensions, and details of the work proposed.

PRESSURE: Relative internal pressure in PSIG (pounds per square inch gauge).

PROJECT: Specific construction within a highway right-of-way for which a permit is sought by the applicant.

RIGHT-OF-WAY: The land conveyed, reserved, secured, dedicated, acquired, or used for highway or street purposes.

ROADBED: The graded portion of a road, between the intersection of top and side slopes, upon which the pavement structure and shoulders are constructed.

ROAD SIDE: A general term denoting the area adjoining the outer edge of the roadway.

ROADWAY: The portion of a highway, including shoulders, for vehicular use.

SEMI-RIGID PIPE: A large diameter metallic pipe designed to tolerate diametric deflection up to 3.0 percent.

SHOULDERS: That portion of roadway contiguous with the traveled way for accommodating stopped vehicles and for lateral support of the base and surface courses.

SIDEFILL: Backfill alongside a pipe

SLEEVE: A short casing through a pier or abutment of a highway structure.

SPECIAL PROVISIONS: Specific directions and provisions additional to these specifications and made a part of the permit, setting forth conditions or requirements peculiar to the permit or project and which govern over these specifications.

STATE AID ENGINEER: The Engineer, appointed by the Governor, who is responsible for administering the State Aid Road Program.

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SUBGRADE: That portion of the roadway prepared as a foundation for the subbase, base and pavement structure. The subgrade may be considered as part of the subbase structure when treated with appropriate additives.

SURETY: That corporate body, qualified under the laws of Mississippi, which is bound with and for the applicant for acceptable performance of the project construction and maintenance.

TRAVELED WAY: That portion of the roadway for the 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.

USE AND OCCUPANCY AGREEMENTS: The document by which the County Board of Supervisors regulates and gives approval of the use and occupancy of County highway right-of-way for utility facilities.

UTILITY: Any public or private company, whether owned by a person, partnership, district, association or corporation, operating an electric, telephone, radio, telegraph, gas, oil, water, or sewer transmission or distribution, proposing to construct or adjust its lines within the right-of-way of a County highway or street. A utility shall include any contractor or subcontractor, or other person proposing to perform work for the applicant within a County highway right-of-way. The words "Applicant" and "Utility" mean the same in this Policy.

VENT: An appurtenance to discharge gaseous contaminants from casings.

WALLED: Partially encased by concrete poured alongside the pipe.

4. GENERAL CONSIDERATIONS:

4.1. Location:

4.1.1. Utility lines should be located in such manner as to minimize the need for later adjustments to accommodate future highway improvements and to permit access for servicing such lines with a minimum interference to highway traffic.

4.1.2. Longitudinal installations should be located on reasonably uniform alignment and as near as practical to the right-of-way lines so as to provide a safe environment for traffic operation and to preserve space for future highway improvements or other utility installations.

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- 4.1.3. Utility line crossings of the highway should cross on a line generally normal to highway alignment to the maximum practical extent.
- 4.1.4. The proposed horizontal and vertical dimensions and clearances for the various types of utilities must be clearly shown on the plans or stated in the agreement between the Board and the Utility.
- 4.1.5. Utility lines shall be installed within the rights-of-way in such manner and at such locations as will provide the maximum roadside clearance from the edge of the traveled way. Normally the installations will be at or near the backside of the right-of-way and should be a minimum of thirty (30) feet from the edge of the traveled way where the right-of-way width and typical cross section will permit.
- 4.1.6. Safety and Convenience/Control of Traffic: Traffic controls for utility construction and maintenance operations shall conform with the Manual of Uniform Traffic Control Devices for Streets and Highways. All construction and maintenance operations should be planned with full regard to safety and to keep traffic interference to an absolute minimum.
- 4.1.7. Servicing, Maintenance and Repairs: All utility facilities should be kept in a good state of repair both structurally and from a standpoint of appearance. The "Utility Use and Occupancy Agreement" should identify maintenance operations which are permitted and indicate situations where prior notification to the County Board is required.
- 4.2. Plans and Design: The Utility and its Engineer shall be responsible for the design and development of plans for the proposed installations and/or adjustments.

The County Engineer, acting as the duly authorized representative of the Board, shall be responsible for the review of plans and design of utility installation to determine if they meet the requirements set out in this Policy and shall recommend approval or disapproval to the Board.

All utility installations shall meet the following minimum requirements:

- 4.2.1. Electrical power and communication lines shall conform to the National Electrical Safety Code.
- 4.2.2. Water lines shall conform to the specifications of the American Water Works Association.

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4.2.3. Pressure pipe lines shall conform with currently applicable sections of ANSI Standard Code for Pressure Piping of the American National Standards Institute and applicable current industry codes, including:

- (1) Power Piping
- (2) Petroleum Refinery Piping
- (3) Liquid Petroleum Transportation Piping Systems
- (4) Gas Transmission and Distribution Piping Systems

4.2.4. Sewer lines - ASTM specifications.

4.3. Application For Permit: The Utility shall request a permit to make a specific installation of its facilities within the rights-of-way. The request must be submitted in triplicate on forms obtained from the County Engineer or other duly authorized representative of the Board, together with detailed sketches and drawings showing the proposed installation.

The County Engineer will review the request and, if found to meet the requirements of this policy, will make his recommendation to the Board whether or not the installation be authorized. When authorized, one copy of the approved request will be furnished the Utility, one copy will be furnished State Aid, and one copy retained by the County.

The County Engineer will keep records of all permits issued and should carefully review subsequent requests to prevent conflicts in the location of utility facilities and interruptions in utility services.

4.4. Board's Jurisdiction Over County Roads: The Board of Supervisors of a County has legal jurisdiction of all County roads, and nothing in this Policy is intended to limit that authority.

4.5. Prosecution and Progress of the Work: The Board and County Engineer will not recognize any Contractor, Subcontractor, agent, or employee on the project except as a direct representative of the Utility named in the application. The Utility Company shall be fully responsible for the work performed under these regulations.

The control of proposed work to be done on County Highway rights-of-way, especially underground installations, will be staked by the Utility engineering personnel to facilitate inspection by the County Engineer prior to installation. Horizontal clearance for the new underground installations should be a minimum of five (5) feet from any previously installed utility to prevent interruption of service.

No work on installations and/or adjustments of utility facilities shall be performed until the permit has been approved by the County and until the County Engineer has been given at least twenty-four (24) hours advance notice.

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The Board and County Engineer may require certain phases of the work to be completed first and shall at all times have authority to regulate the progress of the work within the right-of-way when they deem it to be in the public interest, welfare, and safety.

- 4.6. Utility's Responsibility to the Public: The Utility shall observe and comply with all ordinances and regulations affecting those engaged or employed in the work. The applicant shall also conduct its operations so as to offer the least possible obstruction and inconvenience to the traveling public. The Utility shall provide and maintain, as far as practicable, convenient access to driveways, houses and buildings along the right-of-way under construction, and shall keep the road open, provide barricades, warning signs, flaggers, lights, and other safety devices as needed to warn the traveling public that construction is in progress.

When the use of explosives is necessary for the prosecution of the work, the Utility shall use utmost care not to endanger life or property and shall give ample advance notice to the Engineer when the explosives are to be used. The Utility shall be responsible for the preservation from injury or damage, resulting directly or indirectly, from execution of the work to all public or private property adjacent to the work, such as poles, trees, shrubbery, crops, overhead structures (wires, cable, etc.) and all underground structures such as pipes, conduits, meters, etc., within or outside the right-of-way.

The applicant shall take into consideration other Utilities having facilities within the right-of-way and shall take precautions not to damage or interfere with such property or the use thereof.

- 4.7. Exception:

- 4.7.1. Emergency Repairs: Whenever breaks, leaks or other abnormal occurrences interrupt Utility services, the Utility may restore such services without securing a permit but shall perform such work in such manner as will do the least possible damage to the highway facility and as will create the least possible safety hazard to the traveling public. The Utility shall notify the Board and County Engineer of such emergency repairs.

Where new installations are to be made across a paved highway such new installations shall be made by jacking or boring process and shall be encased as provided in Subsections 5.2 and 6.3 of this S.O.P..

- 4.7.2. Overhead Service and Supply Lines: Work on overhead facilities and supply lines which do not require trenching, excavating or erecting poles or structures within the rights-of-way may be installed by the Utility without a permit, provided such installation does not conflict with the provisions of this Policy nor interfere with traffic in any way.

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5. POWER AND COMMUNICATION LINES:

5.1. Overhead Power and Communication Lines:

5.1.1. Location and Alignment:

5.1.1.1. All overhead or aboveground facilities, including poles, meters, entrance boxes, connectors, and other devices should be located as near the outside limits of the right-of-way as will provide sufficient width to accommodate same. Poles for overhead lines should be not less than thirty feet (30') from the edge of the traveled way.

5.1.1.2. Where irregular shaped areas of the rights-of-way extend beyond the normal right-of-way limits, the location of the utility facility should be such as will provide a reasonably uniform alignment.

5.1.1.3. The trimming and cutting of trees and shrubbery on private property adjacent to the right-of-way line to accommodate an overhead facility is a responsibility of the Utility.

5.1.1.4. Guy wires and cables to ground anchors should not be placed between the pole and traveled way where they will encroach upon the zone or maintenance areas.

5.1.1.5. Longitudinal installations of overhead facilities should be limited to single pole type construction. Where more than one type of overhead facility is to be accommodated, joint use of single pole construction should be encouraged.

5.1.2. Vertical Clearances: The minimum vertical clearances of overhead lines above the roadway surface shall be:

Lines of 750 volts or less	20 Feet
Lines greater than 750 volts	24 Feet
Guy Wires and Cables and Communication Lines	18 Feet

Greater vertical clearances should be obtained when required by the National Electric Safety Code.

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5.2. Underground Power and Communication Lines: Underground facilities shall be installed by accepted methods and practices and shall conform to all applicable codes, standards, and specifications.

5.2.1. Location and Alignment:

5.2.1.1. Longitudinal Installations: The underground facilities shall be located parallel to and adjacent to the right-of-way line so as to minimize interference with drainage and maintenance of the roadside area.

In special cases where it is not feasible to locate the facility adjacent to the right-of-way line, the Board and County Engineer may approve a location between the right-of-way line and the shoulder line, but should not be less than ten (10) feet from the edge of the pavement.

5.2.1.2. The underground installations are not to be constructed on shoulders.

In special cases, installations may be approved on foreslopes, provided the trenching or plowing does not cut through the base and subbase drainage, and further provided that the installations do not undermine the embankment or cut foreslopes.

5.2.1.3. Pedestals or other underground utility appurtenances installed as a part of the buried cable facility should be located outside of the highway maintenance area.

5.2.1.4. Road crossing installations should be located at right angles to the roadway.

5.2.1.5. Roadway structures are not to be used for road crossing installations.

5.2.1.6. Unsuitable locations for underground road crossing installations such as in deep cuts, near bridge footings, across intersections at grade, at cross drains, and in rocky terrain should be avoided.

5.2.1.7. All installations crossing hardsurfaced or paved roads should be accomplished by jacking or boring. The cutting of the base and pavement structures by the open trench method should not be permitted.

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5.2.2. Depth of Bury:

- 5.2.2.1. Longitudinal lines should be installed at a depth of not less than 24 inches below the ground surface where such installations are made outside of cut, ditch or fill slope area.
- 5.2.2.2. Where longitudinal lines are placed within cut, ditch or fill slope areas, the depth of bury should be not less than 36 inches below the ground surface.
- 5.2.2.3. Underground installations of road crossings should be a minimum of four feet (4') below the road surface, and/or three feet (3') below ditch bottom.

5.2.3. Backfill and Resodding of Disturbed Construction Areas:

- 5.2.3.1. All trenches or disturbed areas of construction shall be backfilled and thoroughly tamped in lifts not to exceed six (6) inches to prevent erosion.
- 5.2.3.2. Disturbed areas of construction will be dressed and resodded to restore the area to original condition of natural growth.

5.2.4. Encased and Unencased Construction:

- 5.2.4.1. Electric power or telephone cables must be encased when required by applicable codes and standards governing that particular utility. Encasement of all lines is encouraged for maintenance reasons, since the cutting of the pavement, base and subbase for maintaining or replacing the cables should not be permitted.
- 5.2.4.2. Unencased cable crossings should be limited to small bores where soil conditions permit boring a hole about the same size of the cable and pulling the cable through.
- 5.2.4.3. Where underground road crossing lines are encased in protective conduit, the encasement should extend a minimum of five feet (5') beyond the toes of slope or to the ditch line. Where appropriate, the encasement should extend to a point outside of construction limits to allow for future widening of the Highway facility.
- 5.2.4.4. Where unencased bored installations are proposed, the Utility is to furnish information as to controls and construction methods to be employed before the proposed installation is considered by the County.

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5.3. Attachment of utility Facilities to Bridges:

5.3.1. General: The attachment of utility lines to bridges should be avoided where it is feasible and reasonable to locate the utility lines elsewhere. However, where other locations prove to be extremely difficult and unreasonably costly, consideration will be given to attaching the utility line to a bridge structure by a method acceptable to the County Engineer and the State Aid Engineer. Such consideration shall conform to logical and sound engineering principles for preserving the highway structure, its safe operation, maintenance, and appearance. The following provisions should be adhered to:

5.3.1.1. Each proposed bridge attachment shall be considered on its merits and shall be separately designed. Such attachment will not be considered unless the structure in question is of a design that is adequate to support the utility facility without compromise of highway features, including reasonable ease of bridge maintenance.

5.3.1.2. Utility facility mountings must be of a type that will prevent rattling of the lines under traffic vibrations.

5.3.1.3. Utility installations that would reduce the vertical clearance, otherwise available, above streams, pavements, or rails will not be permitted.

5.3.1.4. On pipe lines carrying liquids, gases and other petroleum products, the utility company shall be responsible for designing the lines so as to eliminate the need for encasement. The lines shall also be designed and attached in such a manner as will prevent corrosion to the concrete and steel members of the bridge.

5.3.1.5. Proposed bridges may be designed over and above normal standards to carry the additional loading of utility lines and the additional costs involved may be charged to the Utility Company.

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6. PRESSURE PIPELINES CARRYING GASES, FLAMMABLE LIQUIDS, OR WATER:

6.1. Design: The Utility is responsible for the design of its facilities in accordance with all applicable codes, standards, and laws. The County Engineer, as the authorized agent of the Board, is responsible for the manner in which the facilities are located on the County right-of-way, including measures to be taken to preserve the safe and free flow of traffic, structural integrity of the highway, and ease of maintenance.

6.2. Location and Alignment:

6.2.1. Pipeline crossings of the highway should be located at right angles to the center line unless practicality and economics warrant and dictate angles of crossing of less than ninety degrees (90°).

6.2.2. Unsuitable pipeline crossings, such as in deep cuts, near bridge or retaining wall footings, across intersections at grade or near cross-drains, should be avoided.

6.2.3. Longitudinal installations should be located generally parallel to and as near the right-of-way line as is practicable so as to minimize interference with drainage and to preserve the integrity of the pavement, shoulders, and slopes, and to promote safety for the traveling public.

6.2.4. Plastic (or vinyl) type pipe used for the mains and service connections of water distribution systems should be taped or wrapped with a single strand of No. 12 plastic coated wire to serve as a means of locating the lines in the future by means of electrical devices.

6.3. Encasement for Carrier Pipe Protection: The County's responsibility pertains primarily to the safety and convenience of the traveling public. The Utility is responsible for the quality and safety of the installation, including non-encased construction, when permitted. The following provisions shall govern:

6.3.1. Encased Pipe for Road Crossings:

6.3.1.1. Encasement is recommended for all pipe installations across paved or hard-surfaced roads, where feasible, as a means of avoiding open trench construction and as a protection of carrier pipe from external loads or shocks.

6.3.1.2. All coated carrier pipes should be encased.

6.3.1.3. All lines carrying liquids should be encased.

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- 6.3.1.4. Lines with less than minimum bury, near footings of bridges and structures, across unstable or subsiding ground, or near other hazards should be encased. All encasements shall be of such design as will support the loads to which they are subjected and shall be of such materials as will be durable under conditions to which they may be exposed.
- 6.3.1.5. It is the responsibility of the Utility company to ensure that the encasement pipes shall be of sufficient thickness as to withstand both external and internal pressures.
- 6.3.1.6. Encasement pipes should extend seven feet (7') from the normal shoulder line of the roadway or a minimum of five feet (5') from the toe of the embankment slope. In curb and gutter sections, the encasements shall extend at least to the back of the curbs.
- 6.3.1.7. Encasements shall be sealed at the ends to prevent debris, soil, and moisture from entering the space between the carrier pipe and the casing.
- 6.3.2. Unencased Pipeline Crossings: Under certain conditions, proposed pipeline crossings may be installed, or existing installations may remain in place, without encasement. The following conditions shall govern in such instances:
- 6.3.2.1. The carrier pipe should conform to the material design requirements of the utility facility and to all governmental codes, specifications, and regulations.
- 6.3.2.2. Carrier pipes shall provide for a higher factor of safety than would normally be required outside of the highway area.
- 6.3.2.3. Existing unencased lines may remain in place without further protection if they were installed at such depth that will not conflict with future highway construction and maintenance and provided that both the County and the Utility are satisfied that the lines are structurally sound.
- 6.3.2.4. In the event it is necessary to replace unencased lines under the roadway, new lines will be installed, since the cutting of the pavement and base should not be permitted.
- 6.3.2.5. When encasement under a road crossing is not provided or when an existing installation is to remain in place with encasement, the utility shall furnish the County with a Certificate as set out below:

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CERTIFICATE OF _____ UTILITY COMPANY FOR THE
UNENCASED PIPELINE CROSSING

PROJECT NO. _____
NAME OF ROAD _____
COUNTY OF _____
STATION NO. _____

We _____ do hereby certify that the line at the location noted above
(Applicant)

carrying _____ shown in this application will not need encasement and that
(gas, oil, or fuels)

the operating pressure will be _____ pounds per square inch. This line will be regularly inspected and adequately maintained. Extra yield strength pipe (will be or was) used in this installation as shown on the sketch or plans for this pipe crossing. Adequate cover for the pipe is provided.

Certified Correct _____
Title _____
Date _____, 20____

6.4. Depth of Bury: The depth of bury established for these pipeline installations should take into consideration a potential increase in ditch depth, resulting from scour, ditch maintenance operations, or the need to increase the capacity of the ditch. Minimum depths are set out below:

6.4.1. Transmission pipelines shall be three (3) feet or more below the surface of normal ground outside of cut, ditch or fill slope areas. Distribution mains may be placed two (2) feet below normal ground line in open or rocky terrain, outside of cut, ditch or fill slope areas.

6.4.2. Lines installed in cut ditches on fairly steep grades shall be a minimum of three (3) feet below ditch bottom.

6.4.3. The depth of bury below the proposed pavement or riding surface of the road shall be a minimum of four (4) feet.

6.4.4 Bury of pipelines carrying transmittants which are flammable, corrosive, explosive, energized, or unstable, particularly if the transmittants are carried at high pressure, must not be reduced below safety requirements recommended by the utility industry involved.

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6.5. Backfill and Resodding of Disturbed Construction Areas:

6.5.1. All trenches or disturbed areas of construction shall be backfilled and thoroughly tamped in lifts not to exceed six inches (6") to prevent erosion.

6.5.2. Disturbed areas of construction will be dressed and resodded to restore the area to original condition of natural growth.

6.6. Appurtenances: Pipeline installation appurtenances such as vents, drains, markers, manholes, and shutoff valves must comply with governing specifications, regulations, and codes of the particular utility industry involved. The additional following provisions must be adhered to:

6.6.1. The Utility shall place readily identifiable markers at the right-of-way line where it is crossed by pipelines carrying transmittants under pressure.

6.6.2. All appurtenances shall be located and constructed in such manner so as not to interfere with the proper maintenance of highway facility.

6.6.3. No appurtenances should be placed within the pavement area or on the shoulders of the highway. Exceptions may be made on streets in urban areas where manholes, as essential parts of existing lines, are permitted to remain in place.

7. MISCELLANEOUS:

7.1. Cleaning Up Construction Site: The Utility shall remove all temporary construction, rubbish, trash, surplus materials, and equipment within the right-of-way area and shall restore such area to a satisfactory condition.

7.2. Restoration and Maintenance of Various Elements of the Highway Facility:

7.2.1. Where the County permits the installation of Utility facilities by the open trench method across a dirt or gravel surfaced State Aid road prior to construction of the base and pavement structure, the embankment, surface and sodding must be repaired and/or replaced to a condition satisfactory to the County Engineer.

7.2.2. The Utility will maintain the highway facility for such length of time as is set out in the Utility Permit.

7.3. Compliance with Utility Industry Codes and Specifications: The specifications and standards set out in the Policy are recommended minimums. Utility industry standards and specifications which are higher than those set out herein shall govern in all cases.

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- 7.4. 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 including scenic strips, overlooks, rest areas, recreation areas, and the rights-of-way of sections of highway which pass through public parks and historic sites.

New underground utility installations may be permitted within such lands 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 should 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 should be considered only where:

- 7.4.1. Other locations are unusually difficult and unreasonably costly, or are more undesirable from the standpoint of visual quality.
- 7.4.2. Underground installation is not technically feasible or is unreasonably costly; and
- 7.4.3. 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 traversed.

These controls should also be followed in the location and design of utility installations that are needed for a highway purpose, such as continuous highway lighting, or to serve a weigh station, rest or recreational area.