

Leavenworth County
Courthouse, 300 Walnut, Leavenworth, Kansas 66048

Utility Accommodation Policy

Prepared by
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Director of Public Works/County Engineer

for
Leavenworth County
Department of Public Works

November 3, 1998

RESOLUTION NO. 1998- 50

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF LEAVENWORTH COUNTY, KANSAS, ADOPTING A NEW "UTILITY ACCOMMODATION POLICY" TO GOVERN ALL UTILITIES OCCUPYING PUBLIC RIGHT-OF-WAYS ON ALL ROADS UNDER JURISDICTION OF THE BOARD OF COUNTY COMMISSIONERS, LEAVENWORTH COUNTY, KANSAS

Now on this 3rd day of November, 1998, the Board of County Commissioners (hereinafter the Board), meets in regular session, and there comes on for consideration and action the following resolution of the Board.

WHEREAS, the County's Public Works Department has reviewed and studied the current standards, specifications and requirements utilized by the County to govern all utilities occupying public right-of-ways on all roads under jurisdiction of the Board in the unincorporated Leavenworth County, Kansas; and

WHEREAS; as part of the continuing process of evaluating, improving and updating the current standards, the County's Public Works Department has written and presented to the Board a New "Utility Accommodation Policy" (1998 ed.) and;

WHEREAS, pursuant to state law, the power of the Board with respect to the property belonging to the County is as set forth generally and principally, but not exclusively, in K.A.S. 19-212.; and

WHEREAS, in keeping with the Board's past practice of providing A Utility Accommodation Policy, the Board desires after having held a public hearing to implement the proposed new standards so as to better provide for protection of the health, safety and welfare of the residents of Leavenworth County, Kansas.

IT IS, THEREFORE; BY SAID BOARD OF COUNTY COMMISSIONERS HEREBY ORDERED AND RESOLVED THAT:

1. The Utility accommodation Policy (1998 ed.), as prepared by the Public Works Department of Leavenworth County, Kansas be hereby adopted as the governing standards, specifications and requirements to govern all utilities occupying public right-of-ways on all roads under the jurisdiction of the Board, in unincorporated Leavenworth County, Kansas. The

Utility Accommodation Policy 1998 edition is hereby incorporated into this Resolution by reference as if they were fully set forth in detail herein.

2. Copies of the 1998 edition shall be furnished, with a eight dollar (\$8.00) fee per copy.

3. Effective upon publication of this Resolution, County Resolution No. 1988-6 is hereby declared to be repealed by this Resolution for the purpose of Utility Accommodation Policy for Leavenworth County.

4. This resolution shall become effective upon publication in the official County newspaper.

ADOPTED THIS 3rd DAY OF November, 1998

THE BOARD OF COUNTY COMMISSIONERS
OF LEAVENWORTH COUNTY, KANSAS

Donald Navinsky
Donald Navinsky, Chairman

Wayne Eldridge
Wayne Eldridge, Member

Robert L. Adams
Robert L. Adams, Member

ATTEST:

Linda A. Steen
County Clerk

David L. Mahoney
David L. Mahoney, P.E.,
Director of Public Works/
County Engineer

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**UTILITY ACCOMMODATION POLICY
OF THE
LEAVENWORTH COUNTY DEPARTMENT OF PUBLIC WORKS**

This policy is adopted by the Board of County Commissioners, Leavenworth County, Kansas, pursuant to the power and authority granted to it by the laws of the State of Kansas.

The power and authority of the Board of County Commissioners with respect to the property belonging to the County is as set forth generally and principally, but not exclusively, K.A.S. 19-212. Also, K.S.A. 17-1901, 17-1902, 17-4604, and 19-2618 have application as to the occupancy of public highways by telephone and telegraph companies and by electric cooperatives, respectively and by person or persons, partnerships or corporations who desire to maintain and operate water mains and laterals and equipment.

All utilities occupying public right-of-ways on all roads under the jurisdiction of the Board of County Commissioners shall be permitted in accordance with permits which shall include a statement as to which party will bear the cost of future adjustments or relocations required as a result of any road, bridge, or culvert improvement or maintenance.

Where laws or orders of public authority, industry or governmental codes, or highway authorities prescribe a higher degree of protection shall prevail.

This policy shall become effective on the date of issuance and shall supersede any and all previously published Leavenworth County Department of Public Works standards and policies concerning accommodation of utility facilities and appurtenances.

In general, all utility installations, adjustments, and/or relocations shall obtain a permit and are to be made with due considerations to highway and utility costs and in a manner where there will be negligible hazards to highway users, the least possible interference with highway facilities and their operations, and no increase in the level or cost of maintenance.

The County Department of Public Works recognizes that any policy which is adopted may create some unforeseen burdens, hardships, or problems, and for that reason when circumstances are encountered which makes the literal application of this policy impossible or impractical, alternate proposals may be submitted to the Director for consideration. Each application will be considered individually.

All work to be performed on public right-of-ways in connection with the installation or relocation of utilities or joint use occupancy shall be authorized by Highway Permit or Highway Utility Agreement issued by the County Department of Public Works.

Any utility installation or relocation accomplished by means of a CONSTRUCTION UTILITY AGREEMENT, required by KDOT for all F.S.A. projects, with the County Highway Department and also covered by Highway Permit will not require the usual bond to be posted with the Permit.

Routine maintenance operation and emergency operations may be performed without a Highway Permit or Highway Utility Agreement, but a County Department of Public Works representative must be notified. See Part I, Section C.

A County Engineer designee will furnish information or assistance required to expedite utility installations. He shall also be responsible for utility company compliance with provisions of the Utility Agreement or Highway Permit covering the installation of work. The County Department of Public Works reserves the right to vary the provisions of this policy, consistent with the general purposes and intent of the policy, as determined by the Director.

Applications for Permits may be obtained at the Office of the Director, Courthouse building, 300 Walnut Leavenworth, Kansas 66048. A copy of the permit application is attached for reference purposes.

DEFINITIONS

ACCESS CONTROL

Full or partial restriction of access from abutting lands to or from the highway.

CONVENTIONAL HIGHWAY

Any highway other than a freeway including the highway intersecting a freeway at any interchange or grade separation except a freeway to freeway interchange.

DEPARTMENT

The Leavenworth County Department of Public Works

DIRECTOR

The Director of Public Works/County Engineer, County of Leavenworth, Kansas.

EASEMENT

An interest in land owned by another that entitles its holder to a specific limited use...such as for installation of a water or gas line.

FREEWAY

A highway with full control of access and all grade crossings eliminated.

FRONTAGE ROAD

A public street or road auxiliary to and located on one side of the highway. (Also called a local service road for service to abutting property and adjacent areas and for control of access.)

HIGHWAY

The entire width of right-of-way dedicated as a public way for the purpose of vehicular traffic.

K.D.O.T.

Kansas Department of Transportation, Topeka, Kansas.

MEDIAN

That portion of a divided highway separating travelled ways for traffic of opposite directions.

NATURAL GAS DISTRIBUTION SYSTEMS

Natural gas mains generally located within cities and towns to

service patrons; generally at pressures not exceeding 60 psi.

PRIVATE UTILITIES

Facilities privately owned, devoted exclusively to private use and not directly or indirectly serving the public or any portion thereof.

PUBLIC WATER SUPPLY SYSTEMS

As defined in KSA 65-162A, and cross referenced to Rural Water Districts. KSA 82 A-612 Definitions.

RIGHT OF WAY

A general term denoting land, property, or interest therein usually in a strip, acquired for or devoted to transportation purposes.

ROADWAY

That portion of the highway extending between curblines or from shoulder line to shoulder line. Divided highway are considered to have two roadways.

SHOULDER

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

TRAVELLED WAY

That portion of roadway, exclusive of shoulders, used for vehicular traffic.

TUNNELING

Excavating the earth ahead of a large diameter pipe by one or more of the following processes. The earth ahead of the pipe will be excavated by men using hand tools while the pipe is pushed through the holes by means of jacks, rams, or other mechanical devices. The excavation is carried on simultaneously with the installation of tunnel liner plates. The tunnel liner plates are installed immediately behind the excavation as it progresses and are assembled completely from the inside.

UTILITIES

All privately, publicly or cooperatively owned lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water, and other similar commodities, including fire and police signal systems and street lighting systems which directly or indirectly serve the public.

POLICY OF ACCOMMODATING PUBLIC UTILITIES ON THE SYSTEM OF ROADS
IN LEAVENWORTH COUNTY, KANSAS

1. INTRODUCTION

A. APPLICATION

1. This section of the policy applies to all public and private utilities, including but not limited to electric power, telephone, telegraph, water, gas, oil, petroleum products, steam, cable television, chemicals, sewage, drainage, irrigation, and similar lines that are to be located, adjusted, or relocated within the right-of-way under the jurisdiction of the Leavenworth County Department of Public Works. Such utilities may involve underground, surface, or overhead facilities either singly or in combination.
2. Replacement of existing utility facilities with those facilities of a different type, capacity, or design is to be considered as a new utility installation and shall adhere to this policy.
 - a. Changes not requiring additional poles or relocation of poles shall not require Highway Permits.
3. All installations of utilities placed on private easements shall be set back a minimum of 60 feet from the center line of all roads in the County. This is to apply to ALL roads whether they be on the County Roads or State Highways. This would apply to all utilities whether they be located above or underground.

Any exception to the required minimum 60 foot location must have prior written approval from the Director of Public Works. Roads in platted subdivisions will be considered at on a case by case situation during the platting process.

All utilities that are placed in public right-of-way are to follow the regulations set forth in this "Utility Accommodation Policy."

II. GENERAL CONSIDERATIONS

A. LOCATION

1. Utility installations are to be located to minimize need for adjustments to accommodate future highway improvements and to permit servicing such lines with minimum interference to highway traffic.
2. Parallel installations and their apputances are to be located on uniform alignment as near as practicable 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.
The County realizes that installation along right-of-way lines are impractical in some cases and if such a situation occurs, the installation shall be made within the right-of-way where so designated by the Director.
3. To extent feasible and practicable, utility line crossings of highway rights-of-way are to be installed normal to the highway alignment.

B. DESIGN

1. The utility is to be responsible for the design of the utility facility to be installed within the highway rights-of-way or attached to a highway structure.
2. Ground-mounted utility facilities should be of a design compatible with the visual quality of the specific highway section being transversed.
3. 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. Conformance with current applicable material specifications and codes is mandatory.
4. On new installations or adjustments of existing utility lines, provisions should be made for known or planned expansion of the utility facilities, particularly those located underground or attached to

structures. They shall be planned so as to minimize hazards and interference with highway traffic when additional overhead or underground lines are installed at some future date.

C. EMERGENCY MAINTENANCE

1. Emergency maintenance of utilities located on highway right-of-way is permissible without first obtaining a Highway Permit Agreement, if an emergency exists that is dangerous to the life, safety or welfare of the public and which requires immediate repair. The utility owner shall take all necessary and reasonable safety measures to protect the traveling public and cooperate fully with the State Highway Patrol, Sheriff's Department and the County to that end.
2. The Utility Owner, in such an event, will advise the County Engineer's office of the locations as soon as possible to insure proper traffic control and coordination with the Department. Any damage to the right-of-way will be restored in accordance with this manual. A permit request should be made by the Utility within the second working day.

D. WORK AREAS

1. No work, other than emergency work, will be permitted on highway right-of-way when the soil condition is such that rutting or other damage is caused to the right-of-way.
2. The area disturbed by utility installations or relocations shall be kept to a minimum, with special care taken to avoid disturbing existing drainage facilities.
3. Restoration of work areas shall utilize methods of seeding or sodding, fertilizing and mulching in conformance with KDOT "Standard Specifications for State Road and Bridge Construction" and any special provisions in the Utility Permits and Agreements.

III. PUBLIC UTILITIES INSTALLED PARALLEL WITH RIGHTS-OF-WAY

A. OVERHEAD INSTALLATION

1. Ground-mounted overhead utility installations shall be located at the outer limits of the right-of-way, preferable within two (2) feet or less of the right-of-way line. If such installation is impractical, however, such installation shall be within the right-of-way where so designated by the Director.
 - a. Where there are curbed sections, the utilities shall be located as far as practical behind the face of the outer curbs and where feasible, behind the sidewalks.
 - b. All poles, guys, anchors, or other appurtenances shall be located to minimize interference with maintenance operations of the County Highway Department.
 - c. No poles, guys, anchors, or other appurtenances shall be located in ditches, at drainage structure openings, or on roadway shoulders.
2. Joint-use construction is encouraged at locations where more than one utility or type of facility is involved.
3. The minimum vertical clearance to overhead installations shall be as required by the National Electrical Safety Code, U.S. Department of Commerce, National Bureau of Standards. However, additional clearance may be requested by the Department in certain instances.

General clearance guides, based on 53 meters (175 foot) spans, are provided in the following table:

<u>Vertical Clearance*</u>	<u>Line Voltage</u>
5.5 m (18 ft.)	0-750
6.1 m (20 ft.)	750-22,000
**	22,000-470,000
***	Over 50,000

*increase general clearance 3 mm (0.01 foot) for each

foot in excess of 53 meters (175 foot) span

**increase general clearance 10 mm (.4 in.) for each 1,000 volts of the excess over 22,000 volts (This factor is adjusted to reflect line to ground voltage.)

***All clearances for lines over 50,000 volts shall be based on maximum operation voltage. For voltages exceeding 50,000 volts, additional clearance specified shall be increased 3% for each 300 m (1,000 foot) in excess of 1,000 m (3,300) above mean sea level.

B. UNDERGROUND INSTALLATIONS

1. Underground utility installations shall be located at the outer limits of the right-of-way, preferably within three (3) to five (5) feet of the right-of-way line.
 - a. The County realizes that installations located at the outer limits of the right-of-way are sometimes impractical, if such a situation occurs, the Director may, upon application of the owner of the utility, allow the installation of the underground utility in another location within the right-of-way.
 - b. If, for various reasons, the Director has allowed an underground installation in the roadway and a drainage structure is encountered with less than 24" of cover, the underground installation shall go under the drainage structure
 - c. Locations where it will be difficult to attain minimum bury due to wet or rocky terrain shall be avoided. Any plan location change must be approved by the Director in advance.
 - d. All underground water and gas line installations shall be in locations approved by the Director.
2. Underground facilities shall be installed at a minimum depth of three (3) feet, except parallel underground direct burial communications cable may have a minimum of 24 inches of cover. Such cable may require greater depth of bury at certain locations including, but not limited to crossings of

stream beds, side roads, and major entrances. In no case shall the depth of cover for any underground facilities be less than that meeting applicable Industry Safety Requirements.

- a. If less than minimum bury is made necessary because of existing utilities, water table, ordinances, or similar reasons, the line shall be rerouted or protected with a casing concrete slab or other means.

IV. PUBLIC UTILITIES CROSSING RIGHTS-OF-WAYS

A. OVERHEAD INSTALLATIONS

1. Where aerial crossings are required, all poles, guys, anchors, and appurtenances shall be located as near the outer limits of the right-of-way as possible.
 - a. No poles, anchors, guys, and appurtenances shall be located in the roadway, roadway shoulder, roadway ditch, or roadway median.
 - b. Where there are curbed sections all poles, guys, anchors, and appurtenances shall be located as far as practical behind the face of the outer curbs and where feasible, behind the sidewalks.
2. Joint-use construction is encouraged at locations where more than one utility or type of facility is involved.
3. The minimum vertical clearance to overhead installations shall be 18 ft. or what is required by the National Electrical Safety Code, U.S. Department of Commerce, National Bureau of Standards. However, additional clearance may be requested by the Department.

B. UNDERGROUND INSTALLATIONS

1. Underground installations shall be located normal to the highway alignment where practical.
 - a. No manhole shall be located in the pavement or roadway shoulder.

- b. Locations which are considered unsuitable or undesirable for pipeline crossings shall be avoided. These include, but are not limited to, locations such as in deep cuts; near bridge footings; at cross drains where flow of water, drift, or stream bed may be obstructed; and in wet or rocky terrain where it will be difficult to obtain minimum bury.
2. Underground installations may be made by open trenching the outer limits of the right-of-way from the right-of-way line to the point established by the intersection of a one to one (1:1) slope from the roadway shoulder and the open excavation. The remainder will be tunneled, augured, or driven through the roadway grade except that open trenching shall be allowed on rock or gravel roads between the hours of 7:00 a.m. and 5:00 p.m. From the hours of 5:00 p.m. until 7:00 p.m. and when a crew is not presently engaged in the installing of an underground installation the trench shall be backfilled. All backfilling shall be in compliance with Section VIII, paragraph B of this policy. From the hours of 7:00 a.m. until 5:00 p.m. when an open trench exists traffic control shall be present and shall comply with the Manual of Uniform Traffic Control Devices.
3. All utilities crossing through ditches and roadways shall have a minimum depth of cover of five (5) below crown grade or three (3) feet below ditch grade the lower of which shall govern. In fill sections the natural ground line at the toe of the slope will be considered as ditch grade. However, in no case shall the depth of cover be less than that meeting applicable Industry Safety Requirements.
 - a. If less than minimum bury is made necessary because of existing utilities, water table, ordinances, or similar reasons, the line shall be rerouted or protected with a casing, concrete slab, or other approved means.

V. CASED AND UNCASD CONSTRUCTION

A. CASED CONSTRUCTION

1. All highway crossings shall be cased unless permissions is given by the Director to make such installation without casing, Section VI, paragraph B for Exceptions.
2. Utility lines crossing highway rights-of-way shall be encased from toe of backslope to the toe of backslope in ditch sections and from toe of fill to toe of fill in fill sections. Sec Section VI, paragraph B for Exceptions.
3. Utility lines installed longitudinally along highway rights-of-ways may require casing at certain locations. Such locations include but are not limited to crossings of side roads and major entrances.
4. Casing installations shall be made by boring, tunneling, jacking, trenching, or other approved methods.
 - a. Bored or tunneled installations shall have a hole diameter which shall not exceed the outside diameter of the casing (including coating) by more than one (1) inch.
 - b. The use of water under pressure (Jetting) will not be permitted to facilitate jacking operations.
 - c. 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.
 - d. If excessive voids or too large bored hole is produced during casing 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.
 - e. All voids caused by boring or jacking shall be filled by pressure grouting when deemed necessary by the Director's Representative. 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.

B. UNCASSED CONSTRUCTION

1. The following lines will not require casement:
 - a. 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.
 - b. Direct buried telephone and communications cable.
 - c. Welded steel lines which are coated and cathodically protected and meet other requirements noted in previous Section IV-B-2.
 - d. Water lines of two (2) inches or less inside diameter, of copper, steel, or plastic.
2. 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.
3. Where it is acceptable to both the utility company and the Leavenworth County Department of Public Works, 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:
 - a. Open trenched construction
 - b. Small Bores

VI. CASING MATERIAL AND USAGE CRITERIA

A. APPROVED MATERIALS

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

CASING NUMBER	MINIMUM WALL THICKNESS
6, 8, 10, 12, 14, & 16"	.188"
18, 20, & 22"	.280"
24 & 26"	.281"
28, 30, 32, & 34"	.312"
36, 38, 40, & 48"	.344"

Casing Diameter under 6" Standard Wall pipe or .188" wall, as preferred.

2. Corrugated metal pipe and coupling bands meeting the requirements of the current KDOT, "Standard Specifications for State Road and Bridge Construction."
3. Reinforced concrete round pipe meeting the requirements of the current KDOT, "Standard Specifications for State Road and Bridge Construction."
4. Vitrified Clay Culvert Pipe meeting the requirements of the current KDOT, "Standard Specifications for State Road & Bridge Construction."
5. Cast iron pipe or ductile iron of the same class as used for carrier pipe, providing it meets the minimum ASTM Specifications.
6. Conduits for underground crossings of Electric or Communication lines may be of non-metallic materials such as polyvinyl chloride schedule 40, Transite or Vitrified clay.

B. USAGE CRITERIA

1. Sanitary sewer lines of fiber, transite, or Vitrified lay Pipe may be installed but plastic must be cased from right-of-way line to right-of-way line.
2. Sanitary sewer lines of cast iron, gravity flow, placed prior to construction and properly bedded, may be installed without casing provided that the cast iron pipe is installed from right-of-way line to right-of-way line with heavy duty cast iron pipe being used within constuction limits and provided that suitable mechanical joints and seals are used.
3. Underground electric service lines 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.
4. All lines carrying liquid petroleum gas, ammonia, chlorine, or other hazardous or corrosive products shall be cased from right-of-way line to right-of-way line and shall be vented and marked at the outer right-of-way limits.
5. Low pressure natural gas distribution and service lines of steel; protected and installed in accordance with industry requirements and standards may be installed without casing. Low pressure is defined as 60 P.S.I. and under.
6. Plastic pipe for water or gas lines may be used within the limits of the right-of-way providing that it meets minimum ASTM specifications and all applicable laws and codes and must stipulate that it is for natural gas pipe...code ASTM D2513. Must also comply with requirements of Federal and State regulations under Title 49 CFT parts 191 & 192.
7. Utility lines will not be permitted to use drainage structures or cattle passes as a conduit or casing.
8. Underground fiber optic lines must be placed in schedule 40 PVC or equivalent from right-of-way to right-of-way line and must be clearly marked by the owner at the limits of the right-of-way.

VII. APPURTENANCES TO PIPELINE INSTALLATIONS

A. VENTS

1. Vents are appurtenances by which fluids between carrier and casing may be inspected, sample exhausted, or evacuated.
 - a. Vents shall be located at the high end of short casing and at both ends of casing longer than 150 feet.
 - b. Vent standpipes shall be located and constructed so as not to interfere with maintenance of the highway nor to be concealed by the vegetation. Where possible they shall be located at the right-of-way line.

B. DRAINS

1. Drains are appurtenances by which liquids or heavy gases may be evacuated or exhausted.
 - a. Drains shall discharge into roadside ditches or natural water courses. Such outfall shall not be used as a wasteway for purging the carrier unless specifically authorized by a County representative.

C. MARKERS

1. The utility company is to place readily identifiable and suitable markers at the right-of-way lines where it is crossed by the lines carrying transmittants which are flammable, corrosive, expansive, energized or unstable, particularly if carried at high pressure or potential, except in those cases where a vent serves as a marker. Markers shall also be placed at the right-of-way line for water lines, and all other utilities when so directed by the Director.

VIII. TRENCHED CONSTRUCTION AND BACKFILL

A. TRENCHES

1. Trenches shall be cut to have vertical faces, where soil and depth condition permit, with a maximum width of outside diameter of pipe, plus two (2) feet. They should be shored where necessary for safety and protect the traveled way.

a. Bedding shall be provided to a depth of six (6) inches or half the diameter of the pipe, whichever is the least.

b. Bedding material shall be free of lumps, clods, stones, and frozen material and shall be graded to a firm but yielding surface without abrupt changes in bearing value.

B. BACKFILL

1. Backfilling of open trenches shall meet the following requirements:

a. Only approved materials that will produce a dense, well compacted backfill such as AB-3 Granular Material or flowable concrete fill, shall be used. Materials containing frozen soil, debris, or organic material shall not be used.

b. The material shall be placed in uniform layers not to exceed six (6) inches in depth and compacted by means of suitable equipment or by tamping with mechanical or hand tampers. Each layer shall be compacted to a density equal to or greater than that of the surrounding soil within the limits of the road right-of-way.

c. The moisture content of the soil used for backfilling shall be uniform and shall be such that required densities can be obtained.

d. Consolidation by saturation or ponding will not be permitted.

e. All open trenches and excavations will be backfilled within forty-eight (48) hours after work is completed

in accordance with KDOT, "Standard Specifications for State Road and Bridge Construction", or as directed by the County Engineer.

All open excavations shall be provided with adequate physical barriers to provide for the public safety. Types of protection shall be fence, barricades, and/or solid coverage or any combination of the above.

C. SETTLEMENT

- a. The Utility Owner shall be responsible for all settlement of disturbed backfills, fills, and embankments which may occur within one year after notice of acceptance of work.
- b. All repairs and/or replacement necessary due to such settlement shall be made by the Utility Owner within thirty days after receipt of notice from the County Engineer.

IX. ATTACHMENTS TO HIGHWAY BRIDGES AND STRUCTURES

A. PERMITS

1. Any public utility proposing to use a new or existing structure for the support of the utility must obtain the approval of the Department as to location of the line on the structure and the method of attachment. The utility company makes application to attach facilities to a structure by submitting a "Highway Permit" form, together with a "Public Utilities on Bridges" form to the Director.

B. DESIGN

1. When the new structure is in the design stage, the Public Works Department, through cooperation with the utility company, may arrange for conduit or pipe hangers to be shown on bridge construction plans for installation by the contractor. Additional costs resulting from such attachments are borne by the utility company unless otherwise provided by agreement.

2. Since highway structure design and site conditions vary the adoption of standardized methods to accommodate utility facilities on structure is not feasible.

3. The utility company is responsible for the design of the facility to be attached to a highway structure.

4. The County authorities shall have the right to review and approve the utilities' proposal, particularly the measures to be taken to preserve the highway, its safe operation, maintenance and appearance. In these respects, the following considerations govern:

- a. Attachment of pipelines carrying liquid petroleum products, toxic gases or fluids will normally not be permitted on bridges or structures except in extreme cases where the owner can make a clear showing that any other location is extremely difficult and unreasonably costly to the consumer.
- b. Structure insurance coverage, for damages that may occur by reason of pipeline attachments carrying PETROLEUM, HAZARDOUS, AND/OR CORROSIVE PRODUCTS will be provided by the Utility company in an amount determined for each bridge or structure by the County Engineer.
- c. In general, utility pipelines and conduits are located within the bays between girders and beneath the bridge deck. Location is subject to approval of the Public Works Department.
- d. Welding and drilling on the steel structure of bridges is not permitted. All attachments to steel structure must be supported by some type of clamping device.
- e. On concrete structures, utilities are attached by use of the plug type anchor installed by drilling the concrete. The explosive type of driving force method of anchoring is prohibited.
- f. Attachment of a line carrying fluids such as petroleum products, water, sewage, etc., to a structure of bridge overcrossing a street, other highway, freeway, or railroad shall be encased throughout the bridge with casing carried beyond the back of the bridge abutments and opened or vented at each end to detect leakage of fluids.
- g. Pipelines carrying natural gas, liquid petroleum products, or other volatile fluid or gas under pressure will require installation of emergency shutoff valves. Such valves placed within an effective distance on each side of the bridge, un-

less the pipeline is equipped with nearby shutoff valves or operates under control of automatic shutoff devices.

- h. Communication and electric power line attachments shall be suitably insulated, grounded and carried in protective conduit or pipe from point of exit from the ground to re-entry. The cable shall be carried to a manhole located beyond the backwall of the structure. Carrier and casing pipe shall be suitably insulated from electric power line attachments.
- i. Satisfactory provisions for longitudinal pipeline movement due to temperature differentials or lineal expansion and contraction of the bridge shall be made in pipeline designs. Such provisions may be line bends. Flexible coupling, or other methods acceptable under appropriate industry codes and practices.
- j. Utility lines installed through existing bridge abutments, wingwalls, or backwalls shall be installed in such a manner that no leakage of water or backfill material shall occur. The hole created in the structure shall be of minimum size and the annular space between the pipe and structure shall be completely filled with suitable mastic substance. Where pipeline sleeves are employed, the space between the sleeve and pipeline shall be filled with suitable mastic material.

X. ADJUSTMENTS OF EXISTING UTILITIES

A. PROTECTION

- 1. Existing utilities which fall in the path of highway construction projects shall be protected as required for new utilities.

B. ADVANCE WARNING

- 1. The highway construction contractor shall be warned and made responsible for the security of existing utilities within the construction zone.

C. ROAD IMPROVEMENTS

1. That in the event the Department deems it necessary or proper to make any alterations or improvements along or upon the highway or right-of-way, the utility agrees to hold the County and the Department harmless of any damage to said utilities along or upon the said highway or right-of-way and the utility also agrees that upon notice being served upon him, he will, within a reasonable time, alter, change the location or move the utility in the highway right-of-way as requested by the Director or his duly authorized representative without expense to the County or the Department aforesaid. In the event the applicant is unable to comply within reasonable time to request to alter, change the location, or move the utility in the highway right-of-way, the Department may cause the work to be done, and the utility will pay the costs therefore upon receipt of statement.

XI. SCENIC ENHANCEMENT

A. OVERHEAD INSTALLATION

1. New aerial installation shall be avoided in areas which have acquired or set aside for their scenic quality such as scenic strips, overlooks, safety rest areas, recreational areas, public parks, and historic sites unless other locations or manner of installations are difficult and unreasonably costly or where suitable designs and materials are employed which give adequate attention to the visual qualities of the area being transversed.

B. UNDERGROUND INSTALLATIONS

1. Underground utility installations may be permitted within such locations 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 land being traversed.

XII. SAFETY AND CONVENIENCE

A. CONTROL OF TRAFFIC

1. Traffic controls for utility construction and maintenance shall conform with the current Manual of Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, and all addendums thereto.

B. SERVICING, MAINTENANCE, AND REPAIR

1. All utility facilities shall be kept in a good state of repair both structurally and from a standpoint of appearance.

XIII. MISCELLANEOUS

A. VARIED USE

1. Pipeline installation permits are to specify the class of transmittant, maximum working pressure, and test and design pressures.
2. Pipelines which are not constructed, operated, and maintained under regulations established under Department of Transportation hazardous Materials Regulations Board, shall upon revision in class of transmittant or an increase in the maximum operating pressure, advise the County Highway Department in writing of such revisions.

B. DISTURBED AREAS

1. The area disturbed by utility installations or relocations shall be kept to a minimum.
2. Restoration of work areas shall utilize methods of seeding or sodding, fertilizing and mulching in conformance with KDOT "Standard Specifications for State Road and Bridge Construction" and any special provisions in the Utility Permits and Agreements.

C. DRAINAGE

1. Care shall be taken in utility installations to avoid disturbing existing drainage facilities.
2. Underdrains shall be provided where necessary.
3. No jetting or ponding shall be permitted under the roadway.

APPENDIX A

I. BOND POLICY & PERMIT COST

II. HIGHWAY PERMITS

III. PUBLIC UTILITIES ON BRIDGES

IV. SIGNING & CONSTRUCTION REQUIREMENTS

A.	Typical Lane Closure	37
B.	Typical Shoulder Closure	38
C.	Typical Section for Trench Cuts in Paved Roads	39
D.	Typical Hangers & Clamps For Bridges	40

Policy adopted by the Board of County Commissioners on Nov. 3, 1998 and revised as of this date:

"Due to a inquiry from the County Auditor regarding the Road & Bridge Department holding checks payable to Leavenworth County, it has been determined that the State Law requires that all checks shall be deposited immediately."

The following policy will apply in the future concerning bonds:

1. All checks held as a bond will be deposited immediately.
2. The County will accept an irrevocable letter of credit from a Kansas financial institution as a bond.
3. The County will accept a bond as issued by an insurance company.

Applicable Bond costs for Highway Permits for various type of Installation.

**HIGHWAY PERMIT BOND
GUIDELINE RECOMMENDATIONS**

1. Bond for lines on Public R/W	\$10.00 lineal feet with a minimum of \$500.00
2. Bond to auger under rock Road	\$750.00
3. Bond to auger under paved roadway	\$1500.00
4. Bond to cut rock road	\$1500.00
5. Bond to cut paved road	\$3500.00

Restore as per drawing "typical sections for trench cuts in paved roads."

5. Failure to obtain a Permit, as required, prior to construction will result in double permit fees being assessed, or \$200.00, whichever is greater.
6. The permitting application will determine the amount of obligation against the bond or the irrevocable credit line. This will also be relieved through acceptance by the Public Works Dept.

7. The following fees will be charged for obtaining Highway Permits and these are non-refundable:

For lines on Public Right-of-Way	\$25.00
Auger under the road	\$30.00
Cut rock road	\$60.00
Cut asphalt road	\$300.00

8. **NOTE:** In no case will the total fee for any one permit exceed \$300.00 unless failure to obtain permit as stated in #5 above.
9. Upon completion of the work, the Company shall notify the Dept. of Public Works at the Leavenworth County Courthouse, 684-0470. A representative of the Dept. of Public Works will respond within 48 hours for inspection of the completed work.
10. When the Company fails to complete the work on Public right-of-way within the time specified in the Highway Permit, he shall be notified by registered mail and given 10 days to request a hearing before the Director of Public Works or the Board of County Commissioners or both to present his case as to why the job has not been completed. If the company does not respond within 10 days, a second 10 day notice will be sent by registered mail and, if no response is received, the Company's bond shall be forfeited and the job shall be completed by Leavenworth County.

LEAVENWORTH COUNTY DEPARTMENT OF PUBLIC WORKS

HIGHWAY PERMIT
USE OF RIGHT OF WAY

WHEREAS DEPARTMENT OF PUBLIC WORKS, Leavenworth County 300 Walnut Leavenworth, KS

hereinafter referred to as County/Owner and _____
Name

Street & Phone No. City/State

As Agent, Lessee, Contractor, hereinafter termed the Petitioner, requests permission and authority to do certain work involving County right-of-way in, upon or along a County road on the _____ side of Section _____, Township _____, Range _____ in Leavenworth County, _____, miles from _____
City/Jct.
described as follows:

Job order# _____ subject to the following conditions and restrictions:

1.0 Plans: Petitioner shall furnish one (1) set of comprehensive plans or sketches, 8 1/2 x 11" or larger, of the proposed work.

1.1 An "As-Built" Survey signed by a registered Land Surveyor showing the location of the utility in relation to the nearest GLO corners be provided at the completion of construction

1.2 Entrance locations and utility installations must be approved by the Director or his duly authorized representative.

1.3 Drainage structure to be determined by the County Department of Public Works.

PERMIT FEE \$ _____

- 2.0 Materials and Methods: All materials and construction methods used on work within the limits of the right-of-way shall be in conformance with the standard requirements of the industry and the Director.
- 2.1 Commercial Entrances shall be surfaced with materials of the same general type as roadway surfacing.
- 3.0 Completion: The Petitioner shall furnish all materials, do all work, pay all costs and restore said right-of-way to the condition existing prior to approval of work described on this permit. Work to be completed within _____ Da/Mo. of APPROVAL DATE, otherwise permit null and void. An extension of time may be requested in writing. After the petitioner has satisfactory completed the work in accordance with this permit, any additional work at said site location involving the laying of future new lines will necessitate that the Petitioner shall apply for and obtain another permit from the County.
- 3.1 Petitioner agrees that an approved signed copy of permit will be on premises before any work is performed.
- 4.0 Bond: A check, or other suitable bond, in amount of _____ dollars \$_____ made payable to the Leavenworth County Road and Bridge Fund is hereby deposited with this permit to guarantee performance of the conditions of the permit.
- 4.1 The Petitioner agrees that bond will be forfeited in case of failure or refusal to perform the work to the satisfaction of the Director.
- 4.2 The petitioner agrees to notify the Director when work covered by the permit is initiated and again when completed.
- 4.3 The County agrees that upon satisfactory compliance with all conditions of the permit, said bond will be released.
- 5.0 Obstruction of Traffic: Petitioner agrees that there will be no interference with traffic, unless specifically provided for as a part of the permit. Traffic protection to be in accordance with Uniform Manual for Traffic Control Devices. See Appendix A, page 38 & 39 attached and made a part of this permit.
- 6.0 Right-of-Way: Petitioner agrees that no portion of the right-of-way will be used for parking, advertising signs or any other commercial activity.
- 6.1 Any sod, shrubs or trees destroyed by this work shall be replaced as directed by the Director of his authorized representative.
- 7.0 The Petitioner, his successors, or assigns shall assume all risk and liability for accidents and damages that may accrue to persons or property on account of this work. In maintaining said work from time to time in the future the Petitioner agrees that he or his successors and assigns shall give forty-eight (48) hours advance notice of such work to be done to the Leavenworth County Engineer's office. This notice shall be in writing, unless an emergency exists at said site location in which event a telephone call to the engineer's office will suffice.
- 8.0 That in the event the County deems it necessary or proper to make any alterations or improvements along or upon the highway or right-of-way, the Petitioner agrees to hold the County harmless for any damage to said Petitioner's construction along or upon the said highway or right-of-way and the petitioner also agrees that upon notice being served upon him, he will, with a reasonable time, alter, change the location or move his construction work off the highway right-of-way as requested by the Director or his duly authorized representative without expense to the County aforesaid.

8.1 In the event the applicant is unable to comply within a reasonable time to request to alter, change the location, or move his construction or work off the highway or right-of-way, the Leavenworth County Department of Public Works may cause the work to be done, and the applicant will pay the costs therefore upon receipt of statement.

9.0 Other conditions and restrictions:

It is agreed between the parties hereto that the County shall have the right from time to time in the County sole and absolute discretion to have a representative of the County Engineer's office at the site of the installation where work is to be performed under this permit, so that the representative of the County Engineer's office can observe and determine the work being done at said site is being done in accordance with the conditions of this permit. The petitioner agrees to pay to the County a fee for each such engineering inspection that may be made, said fee to be commensurate with the usual and regular fees or charges then prevailing in this area for such engineering inspection services.

Proposed construction approved on this permit is to be conducted in such a manner as to interfere in no way with construction or contractor's work on a project.

This permit is hereby accepted and its provisions agreed to this as dated below.

Agent/Lessee _____
Contractor _____
For Utility _____
Utility/Owner _____

Permit granted this _____ day of _____, _____.

Permit granted as corrected this _____ day of _____, _____.

LEAVENWORTH COUNTY HIGHWAY DEPARTMENT.

Director of Public Works

By _____
For the Director

11/3/98

LEAVENWORTH COUNTY DEPARTMENT OF PUBLIC WORKS

AGREEMENT FOR

PUBLIC UTILITIES ON BRIDGES

THIS AGREEMENT, made and entered into this _____ day of _____, _____ by and between the Leavenworth County Department of Public Works with headquarters at Leavenworth, Kansas, hereinafter called "the Commission", and the with office in _____ State of _____ hereinafter called "the Company".

WHEREAS, the Commission has jurisdiction and control of all bridges within the County of Leavenworth on all right-of-ways owned by the County; and

WHEREAS, the Commission feels that it is for the benefit of the public of the County of Leavenworth to allow Public utilities to utilize their bridges in certain circumstance; and

WHEREAS, the Company desires to construct and maintain a _____ pipeline across and on Bridge No. _____ in Leavenworth County, Kansas.

NOW, THEREFORE, in consideration of the permission of the Leavenworth County Highway Department to utilize its bridge for said pipeline crossing, the Company agrees to the following terms and conditions, to-wit:

- 1. That they will construct and maintain said pipeline without any cost whatsoever to the Commission in accordance with a

plan approved by the Director.

a. That all materials used and any construction methods employed shall be first approved by the Director.

b. That during any period of construction or maintenance of said pipeline they will not interfere with or obstruct traffic on said bridge.

c. That any maintenance of said pipeline shall be performed to the satisfaction of the Director.

2. That they will assume all risk and liability for injuries and damages that may occur to persons or property by reason of the negligence of the Company or its representatives in constructing or maintaining the pipeline on said bridge and that they will further hold the commission harmless from any and all claims or demands for any such injuries and damages which result therefrom.

a. That they will furnish to the Commission evidence that their assets are, free and clear from any and all demands, in excess of \$500,000 or in the event that they are unable to do so:

b. Furnish the Commission a certified copy of an endorsement of the general insurance liability coverage of the Company indemnifying the commission against loss or damage by reason the operations of the Company or its representatives. That said endorsement shall be attached to and made a part of this agreement.

The Company shall furnish dates of termination and renewal of its general insurance liability coverage to the Commission; that the amount of insurance coverage applicable to the bridge and the property of the Commission shall be \$250 per foot for the length of the bridge. That the amount of personal liability coverage shall not be less than \$35,000 for each person nor less than \$500,000 for each accident.

3. That in the event the Commission deems it necessary and proper to make any alteration in or improvement on said bridge or the approaches thereto, the Company will within a reasonable time after written notice from the Commission and without cost or expense to the Commission, alter, change the location of, or remove said pipeline as requested by the Commission.

4. That no work will commence either on construction or maintenance until the completed copy of Leavenworth County Highway Department "Highway Permit" is issued.

It is mutually agreed and understood by the parties that this agreement may be terminated or cancelled by either party upon thirty days written notice and all rights and privileges accrued to the Company by the terms of this agreement shall cease forever and upon termination or cancellation of this agreement the Company shall remove said pipeline without damage or injury to the bridge and the Company further agrees to reimburse the Commission of any and all damages which result written.

LEAVENWORTH COUNTY HIGHWAY DEPARTMENT

BY _____
Director of Public Works

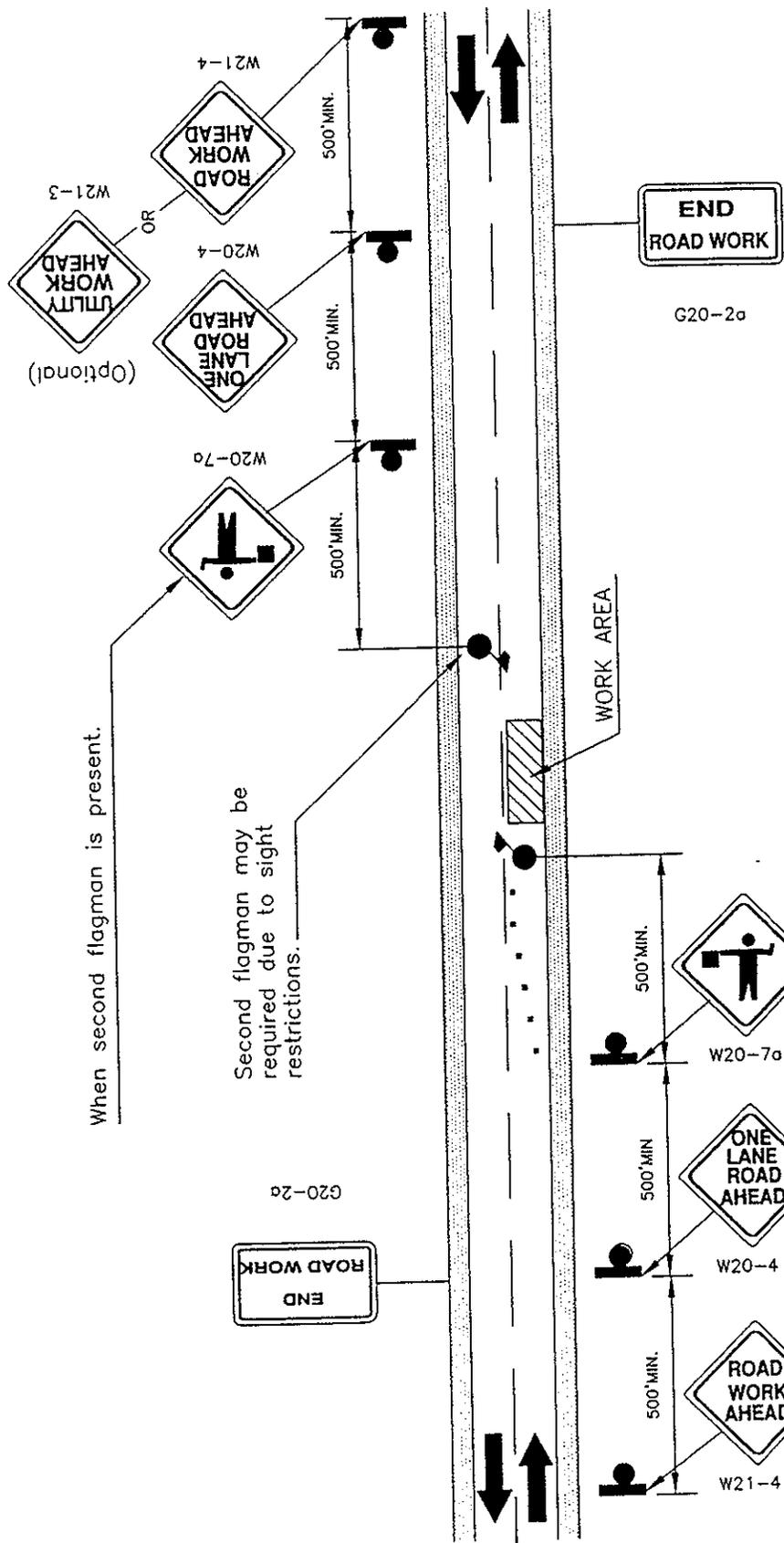
Attest:

County Clerk

By _____
Utility President/Agent

Attest:

TYPICAL LANE CLOSURE



When second flagman is present.

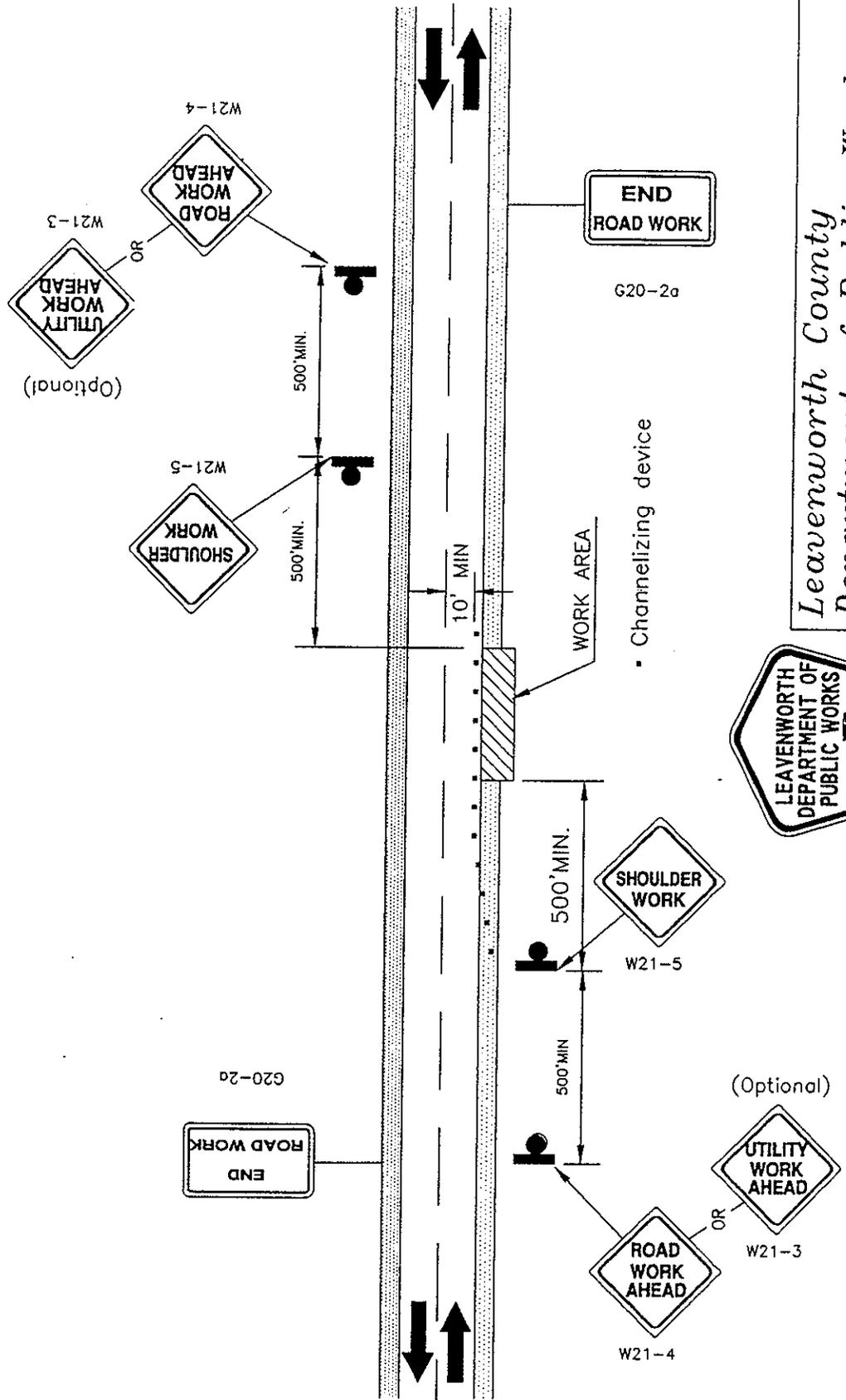
Second flagman may be required due to sight restrictions.



Leavenworth County
Department of Public Works

DESIGNED BY: DLM DATE: JAN 28, 1997

TYPICAL SHOULDER CLOSURE



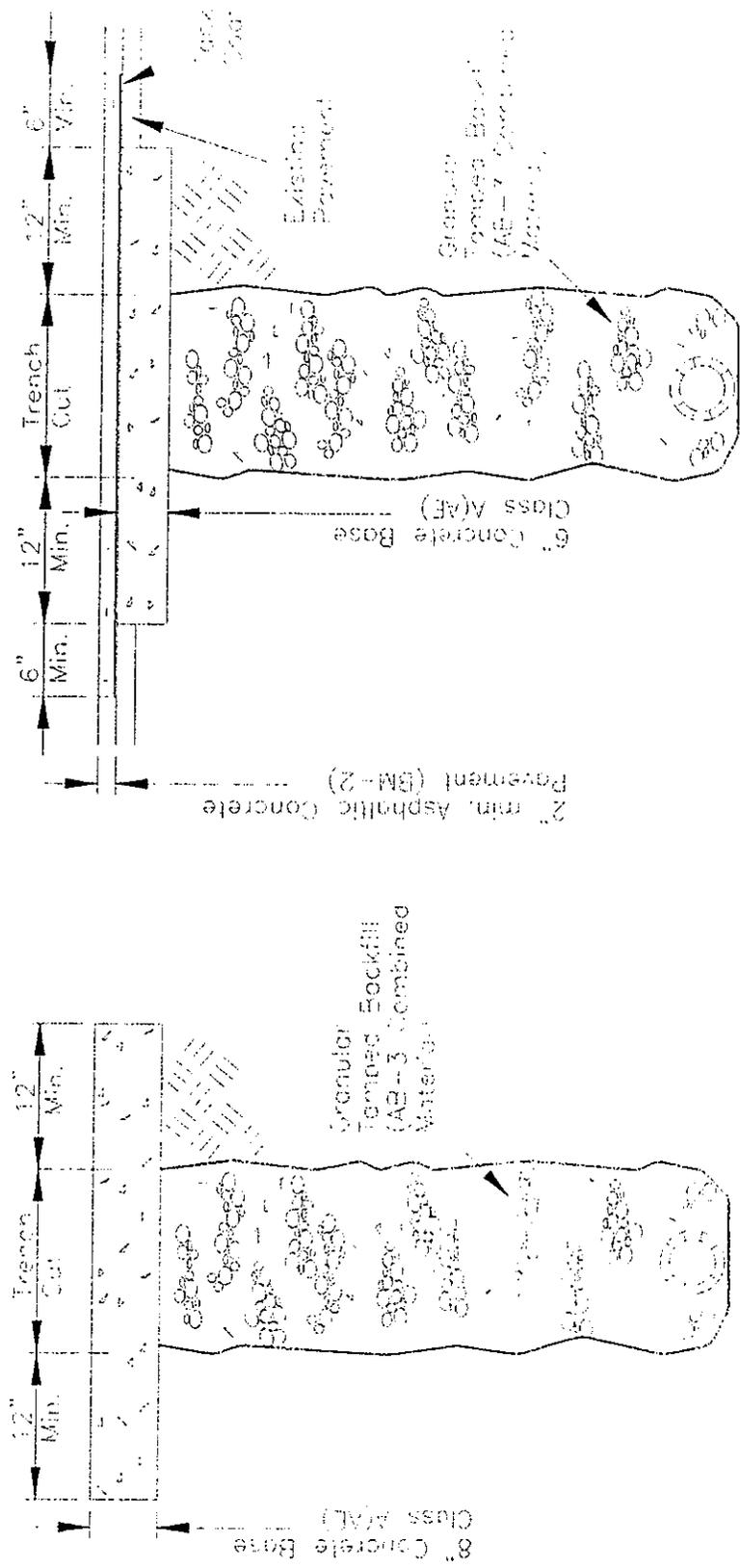
Leavenworth County
 Department of Public Works

DESIGNED BY: DLM DATE: JAN 28, 1997

NO SCALE SHEET 38 OF 40



TYPICAL SECTIONS FOR TRENCH CUTS IN PAVED ROADS



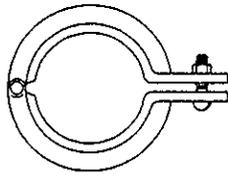
BACKFILLING WITHIN CONCRETE PAVED AREAS

BACKFILLING WITHIN ASPHALT PAVED AREAS

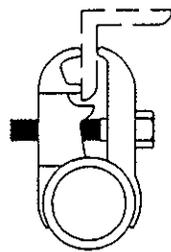


NOTE: All materials shall meet or exceed Kansas Department of Transportation Standard Specifications for State Road & Bridge Construction, and shall be approved by the Leavenworth County Engineer. Concrete shall be substituted for 2" and 4" AE-3 Concrete.

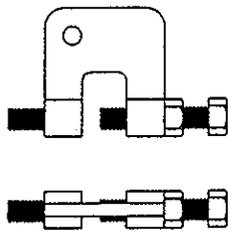
HANGER & CLAMP TYPES



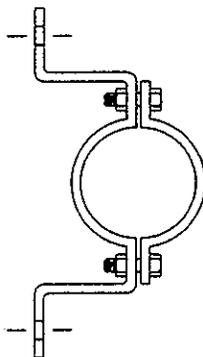
SPLIT RING
HANGER



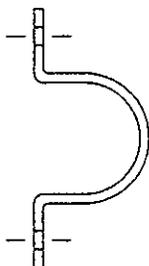
PARALLEL PIPE AND
CONDUIT CLAMP



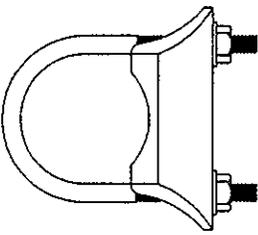
"C" CLAMP
WITH LOCKNUT



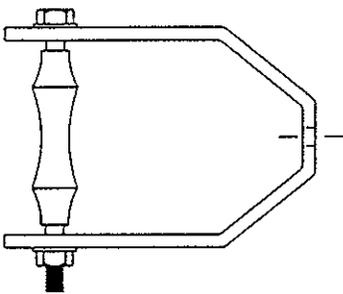
OFFSET
PIPE CLAMP



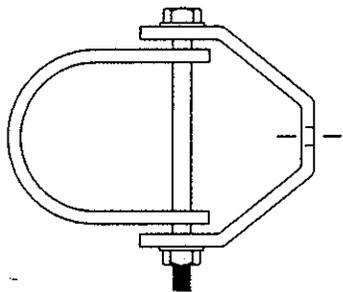
HOLD DOWN
PIPE CLAMP



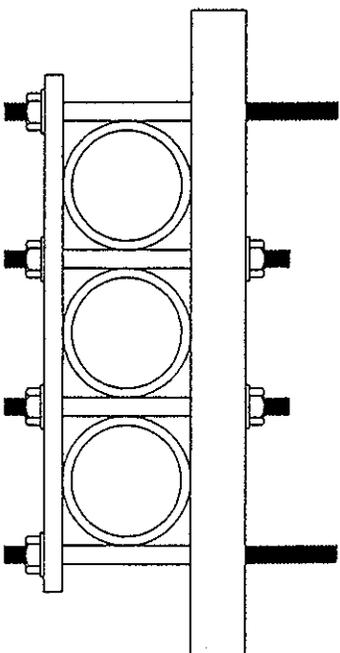
RIGHT ANGLE
PIPE CLAMP



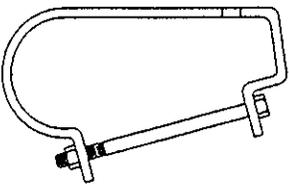
PIPE ROLLER HANGER



CLEVIS HANGER



DUCT SUPPORT SYSTEM



T-SLOT HANGER



Leavenworth County
Department of Public Works

DESIGNED BY: DIAM DATE: 10 30 98

NO SCALE SHEET 10 OF 10

DWG FILE: C:\JIMS\LG1ANG