UTILITY MANUAL OF INSTRUCTIONS

Utility Relocation Policies & Procedures

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UTILITY MANUAL OF INSTRUCTIONS
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Table of Revisions

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VDOT Utility Manual

Manual of Instructions

Utility Relocation Policies & Procedures

Commonwealth of Virginia
Department of Transportation

11TH Edition
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PREAMBLE

The Virginia Department of Transportation (VDOT) is charged with constructing, maintaining, and operating the Commonwealth of Virginia's highway systems safely and efficiently for the benefit of the citizens of the Commonwealth. The use of VDOT's rights of way by public utilities is a privilege extended to the utility owners by VDOT in an attempt to best serve the public interest. VDOT believes that substantial benefits may be gained by allowing utilities to use highway rights of way and supports this practice as being in the public interest, where practical and when adequate controls are employed. VDOT has established policies and procedures governing the locations where utilities may be placed within VDOT right of way. These policies and procedures are contained in VDOT's Land Use Manual.

This tenth edition manual replaces all previous utility relocation procedures manuals, and directives pertaining to utilities on transportation construction and maintenance projects controlled by VDOT. It outlines the policies and procedures under which utility owners shall relocate existing utilities and/or install new utilities in connection with the transportation construction or maintenance projects.

As a result of more and more utilities being installed and relocated onto the highway right of way, a strong emphasis is being placed on eliminating potential conflicts between highway and utility facilities and on minimizing conflicts between the various utilities. Utility owners with facilities on VDOT's rights of way must accept responsibility:

a. to protect the public investment in the right-of-way, roadbed, and structures; and,

b. to maintain adequate traffic service and safety for the highway user during the installation, maintenance, and operation of their facilities.

VDOT intends to exercise firm control, but does not intend to cause any unnecessary hardship to any utility owner relocating and/or installing utilities on transportation construction or maintenance projects. The purpose of this manual is to outline the controls over utility functions during the transportation project, while recognizing the interests of the utility owners during this process.

The public interest can best be served with thorough effective communication between VDOT and the utility owners with regard to:

a. the impact of the transportation construction plans on the existing utility facilities;
b. the policies, procedures and guidelines herein;
c. the guidance under which these are to be implemented; and,
d. the utility relocation plans showing new and/or relocated utility facilities not in conflict with the transportation project.

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CHAPTER 1

INTRODUCTION AND ORGANIZATION

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CHAPTER 1

INTRODUCTION AND ORGANIZATION

1.1 GENERAL

This chapter outlines the objectives, and informs the reader of the authority by which the Virginia Department of Transportation (VDOT) operates and will provide an organizational outline of VDOT as it relates to the utility relocation program. (See Appendix No. 1 for the Flow Chart for Utility Activities)

1.2 INTRODUCTION

The VDOT Utility Manual outlines VDOT policies and procedures to be used in the timely relocation of existing utility facilities and/or installation of new utility facilities in conjunction with all transportation projects. These policies shall apply to all investor-owned and publicly-owned utilities and shall also be used as a guide in dealing with privately-owned utilities during right of way and construction activities.

This manual is primarily for the use of VDOT representatives to facilitate their efforts in the relocation and installation of utilities. However, it is also intended to provide guidance to utility owners, consultants, localities, design-builders and others involved in this process. This manual outlines the requirements and actions to be taken to accomplish the relocation and/or installation of utilities on VDOT transportation projects in an efficient and timely manner.

1.3 OBJECTIVES

The objectives of this manual are:

a. to establish standard procedures for the relocation and installation of utilities on VDOT construction projects;

b. to help utility owners accomplish their work in a safe manner with the least delay and minimum interference with VDOT contractors or other utilities;

c. to prevent service disruptions, damage to utility facilities, and hazardous conditions;

d. to ensure the proper performance, high quality, and timely accomplishment of utility work; and,

e. to ensure correct and timely reimbursement of costs to each utility owner as required.

1.4 AUTHORITY

VDOT, through the Commonwealth Transportation Board (CTB), has been given the authority in Section 33.2-210 of the 1950 Code of Virginia, as amended, to make rules and regulations, which are not in conflict with the laws of the State, for the operation, maintenance, control and use of the State Highway Systems. These rules and regulations have the force and effect of law by virtue of Section 33.2-210 of the Code of Virginia.

1.5 ORGANIZATION

The CTB establishes policies under which the Utilities Section functions. These policies are based on specific laws of the Commonwealth of Virginia and upon rules and regulations of the CTB, which have the force and effect of law.

The Commissioner of Highways has the responsibility of carrying out the CTB's policies and to assure that all applicable laws are followed. The Chief of Policy and Environment and the State Director of Right of Way and Utilities have been duly authorized to execute formal agreements with utility owners that provide for the relocation of utilities. The Attorney General's Office interprets the applicable statutes and actions of the CTB and advises the Utilities Section on other legal matters.

The Utilities Section is a discipline of the Right of Way and Utilities Division and is managed by the State Utilities and Property Manager and reports to the State Director, Right of Way and Utilities in the Central Office. The State Director reports to the Chief of Policy and Environment. The Central Office Location and Design Division, Hydraulics and Utilities Program Area, is responsible for the technical design function for in-plan utility relocations. The Central Office Utilities Section of the Virginia Department of Transportation is located at 1401 East Broad Street, Richmond, VA 23219, Telephone (804) 786-2923.

The Right of Way and Utilities Division is divided into three regions outside of the Central Office. The Western Region is primarily responsible for the Bristol, Lynchburg, Salem and Staunton Construction Districts. The Northeast Region is primarily responsible for the Culpeper, Fredericksburg and Northern Virginia Construction Districts. The Southeast Regions is primarily responsible for the Richmond and Hampton Roads Construction Districts.

The Regional Utility Coordinators report to the Regional Utilities Managers. The

Regional Utilities Managers report to the State Utilities and Property Manager.

The nine VDOT Transportation Construction District Offices and their locations are:

DISTRICT	LOCATION
Bristol District P.O. Box 1768 870 Bonham Road Bristol, VA 24203	Exit 7 - I-81 east on Airport Road south on Bonham Road
Culpeper District 1601 Orange Road Culpeper, VA 22701	Route 15, 0.5 mile south of Culpeper
Fredericksburg District 87 Deacon Road Fredericksburg VA 22405	1.5 miles NE of Fredericksburg on Route 603
Hampton Roads District P.O. Box 1070 1700 North Main Street Suffolk VA 23434	Located on Route 460
Lynchburg District P.O. Box 11649 4219 Campbell Avenue Lynchburg, VA 24506	Route 501. 0.3 miles south of intersection of Rtes. 460 & 501 south of Lynchburg
Northern Virginia District 4975 Alliance Drive Fairfax, VA 22030	0.01 mile north off West Ox Road at the intersection of Route 29 (Lee Hwy) and Fairfax County Parkway (Rte 286)
Richmond District P.O. Box 3402 2430 Pine Forest Drive Colonial Heights, VA 23834	Off of Route 1 4 miles north of Petersburg

Salem District P.O. Box 3071 731 Harrison Avenue Salem, VA 24153	4 blocks north of Main Street off Route 311
Staunton District 811 Commerce Road Staunton, VA 24401	On Route 11 By-Pass north of Staunton

Telephone contact can be routed through the VDOT Call Center at 1-877-367-7623

Generally, the Regional Utilities Manager or designee deals directly with the local offices of the utility owners in obtaining utility plans and estimates as well as receiving and processing the utility billings. The Regional Utilities Manager or designee reviews as well as approves the utility work in the Regional/District Office. After a utility owner has been given the notice to proceed with adjustment of utilities, the District inspection staff is responsible for making certain that the utility work progresses on schedule and in accordance with the approved plan and estimate. The Regional Utilities Manager or designee may assist the District inspection staff in this regard.

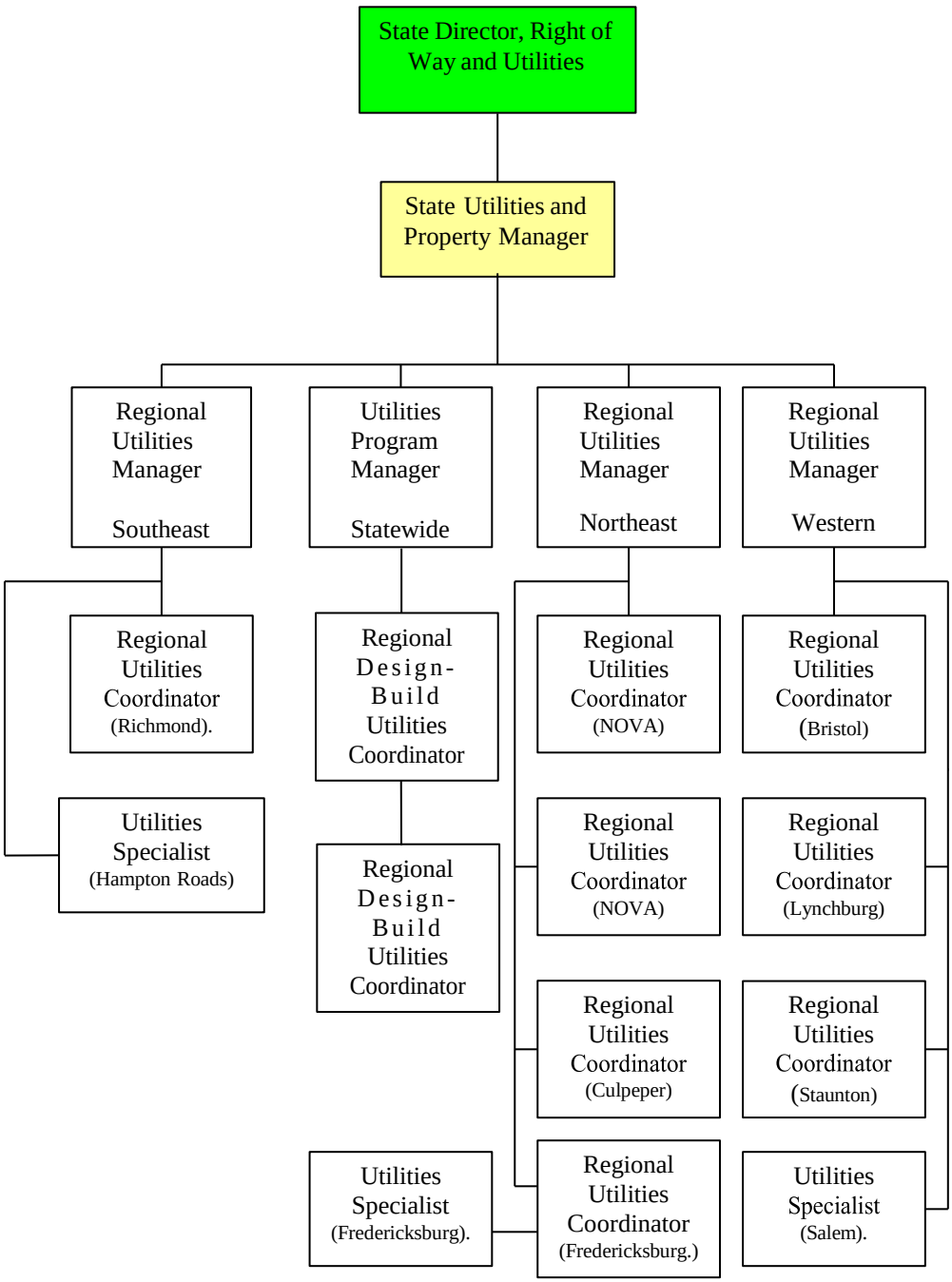
The District or Design Builder's inspection staff shall supply a Utility Inspector to ensure all utility work is completed in accordance with the plan and estimate. The Utility Inspector is responsible for completing and certifying the relocation construction (Form UT-7 and UT-7a, UT-7b, as applicable, Appendix 20). The UT-7 must then be submitted to the Regional Utilities Manager or designee and shall be included with the final invoice when submitted for payment.

1.6 ORGANIZATION CHART

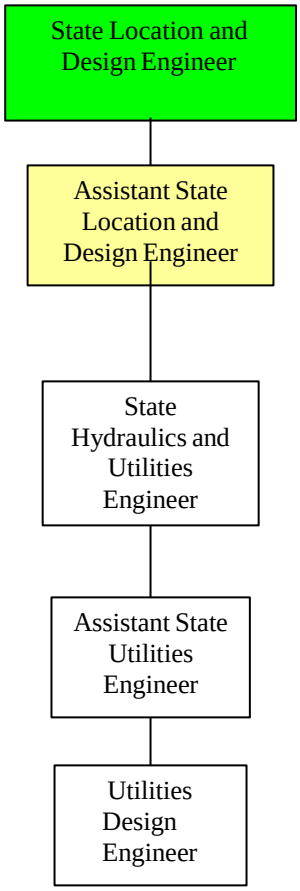
VDOT currently has project related Utility responsibilities distributed between the Right of Way and Utilities Division (Coordination, Authorization, Relocation), the Location and Design Division (In-Plan Design), and the District Inspection Staff. The Transportation Planning & Mobility Division is responsible for utility accommodations within VDOT's right of way under the Land Use Permit Regulations.

The following is the organizational chart of VDOT Statewide Utilities functions per Division:

Right of Way & Utilities



Location & Design



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CHAPTER 2

LEGAL

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CHAPTER 2

LEGAL

2.1 GENERAL

This chapter identifies the legal basis under which the Commonwealth Transportation Board (CTB) operates and makes rules governing utilities.

2.2 UTILITIES LOCATED ON HIGHWAY RIGHTS OF WAY

The authority by which the CTB makes rules and regulations governing the relocation of existing utilities and installation of new utilities within the roadway right of way is derived from the 1950 Code of Virginia, as amended, more specifically Section 33.2-210. The CTB has the authority to make rules and regulations (which are not in conflict with existing laws of the State) that will provide for the protection and use of the State Highway Systems. These rules and regulations have been given the force and effect of law by Section 33.2-210 of the Code of Virginia.

Accordingly the CTB has adopted the following:

Any facility placed within the roadway right of way, with or without a permit, shall be relocated at the request of the Virginia Department of Transportation and the cost shall be borne by the owner of the facility, unless VDOT agrees otherwise.

In addition to the rights of way controlled by VDOT, this rule also applies to the rights of way controlled by political subdivisions of the State (such as cities, towns, etc.) on which VDOT and the political subdivision are participating or sanctioning the construction or reconstruction of a roadway. On urban projects, the terms of any Franchise Agreement

between the utility owner and municipality will determine cost responsibility unless state statutes dictate otherwise.

This is the general principle on which the determination is made as to whom, VDOT or the utility owner, will bear the cost of the utility relocation work on transportation construction or maintenance projects. Simply stated, "IF A UTILITY IS LOCATED WITHIN THE EXISTING ROADWAY RIGHT OF WAY, THE COST TO RELOCATE/ADJUST THE UTILITY IS TO BE BORNE BY THE UTILITY OWNER." Exceptions to this rule are covered in Sections 2.7 through 2.8 and elsewhere in this manual. Typically, the exceptions require the utility to prove it has compensable rights as a result of real property interest, prior vested rights or from a previous agreement.

2.3 UTILITIES LOCATED ON OTHER PUBLIC PROPERTY

There are many situations where the utility is neither located on VDOT right of way nor on private property. In these situations where written documentation is not present, the utility must relocate at no cost to the project. Some examples of these situations are:

a. Property that has been dedicated or acquired for street or road purposes;

b. Federally owned land;

c. Streams and rivers (these have been declared to be highways and therefore only revocable permits are issued to utility owners for such occupation); and,

d. State owned land.

2.4 UTILITIES LOCATED ON PRIVATE PROPERTY

When a utility facility is located on private property by a recorded easement or with the apparent acquiescence of the private landowner, the utility is said to have a real property interest or right. The non-betterment cost to relocate the utility from its real property interest or by right situation shall be borne by the project in accordance with Section 33.2-1014 of the Code of Virginia as amended.

The utility owner shall prove it has a real property interest on private property by furnishing a copy of the recorded easement for each specific parcel

In the absence of a recorded instrument the utility owner may document a compensable right through apparent acquiescence. The utility owner can furnish the following statement:

> This is to certify the facilities of (Utility Owner) found to be located outside the existing right of way, within the termini of the project, and found to be in conflict with the construction of Project: (VDOT Project Number), are located on private property and the property owners have not contested the validity of the occupation of said facilities. In accordance with Section 33.2-1014 of the Code of Virginia as amended, the (Utility Owner) enjoys a compensable right in the location of said existing utilities.
>
> VDOT will not be responsible for providing a replacement easement in the utility owner's name unless the utility owner furnishes an existing recorded instrument in their name.

2.5 RAILROAD PROPERTY

It has been determined that railroad property is private property and utilities occupying railroad right of way have a compensable right (See Section 2.4). Documentation of this right can be made by furnishing a copy of the license under which the utility facilities were installed or by submitting the written statement found in Section 2.4.

2.6 PRIOR RIGHTS

There are occasions when a utility owner has existing facilities located on VDOT right of way and has a compensable right to be in that location. This is called a “Prior Right” and occurs when:

a. The utility was constructed on private property and the utility and its easement were encompassed by a VDOT project. (For proper documentation of these rights, the utility owner must provide copies of easements under which the utility was constructed or a copy of the old project plans showing the utility outside of the previous existing right of way);

b. The utility was relocated onto VDOT right of way under a previous project and at that time it was agreed, that if it became necessary to relocate for a future transportation project, the cost would be borne by the project participants. (For proper documentation of this right, the utility owner must furnish a copy of the utility agreement or a copy of the "land use" permit stating the arrangement previously agreed to by VDOT); and,

c. The utility was placed on the right of way under the terms of the Comprehensive Agreement. (For proper documentation of this right, the utility owner or its assigns must have executed the Comprehensive Agreement. In addition, the locations of the utility facilities and the width of VDOT's right of way must conform to the requirements of the Comprehensive Agreement. See Section 2.7 for an explanation of the Comprehensive Agreement).

d. The land upon which the utility was located was dedicated to VDOT or a locality as part of a development plan. The utility owner must provide a land use permit indicating "prior rights" or documents to prove their presence prior to the date of dedication.

2.7 COMPREHENSIVE AGREEMENT

The Comprehensive Agreement was entered into by VDOT and several utility owners for the purpose of keeping to a minimum the combined widths of rights of way and easements needed for public purpose. The Comprehensive Agreement provides that when the roadway right of way is 110 feet or greater in width, the utility owner may relocate its facilities along the outer 15 feet of right of way. In the event a future highway project necessitates the relocation of said utility facility, the non-betterment cost of the relocation will be on a 50-50 prorated basis. Also, a utility facility can be relocated from state right of way at 100% utility owner's cost to a 110 feet or greater of roadway right of way, complying with the conditions of the comprehensive agreement, and thereafter come under the 50-50 prorate. Likewise, existing utility facilities can be relocated from easement or other types of right of way at project cost to a 110 feet or greater of highway right of way and become subject to similar 50-50 prorate basis on future highway projects. The Comprehensive Agreement does not apply to Interstate or other Limited Access right of way facilities.

2.7.1 UTILITY COMPANIES THAT HAVE SIGNED A COMPREHENSIVE AGREEMENT

The following is a list of utility owners that have executed the Comprehensive Agreement. If a change in the utility owner's name has occurred since executing the Comprehensive Agreement, the current name, if changed, is shown in parenthesis.

Virginia Electric and Power Company January 1, 1952
(Dominion Virginia Power), Richmond, Virginia

Peoples Mutual Telephone Company December 12, 1952
Gretna, Virginia

Shenandoah Telephone Company (Farmers Mutual) November 30, 1954
Edinburg, Virginia

General Telephone Company of the Southeast June 6, 1956
(Verizon South or GTE) Bluefield, West Virginia

The Chesapeake and Potomac Telephone Company of Virginia June 18, 1956
(Verizon Virginia or Bell Atlantic-Virginia, Inc.), Richmond, Virginia

Tidewater Telephone Company July 18, 1956
(Verizon South or GTE), Warsaw, Virginia

United Inter-Mountain Telephone Company August 31, 1956
(CenturyLink, Embarq or Sprint United Telephone), Bristol, Tennessee

Powell Valley Electric Cooperative October 30, 1956
Jonesville, Virginia

Accomack-Northampton Electric Cooperative March 18, 1957
Parksley, Virginia

Virginia Telephone & Telegraph August 20, 1957
(CenturyLink, Embarq or Sprint-Atlantic Telecom), Charlottesville, Virginia

Harrisonburg Telephone Company August 21, 1957
Continental Telephone Company of Harrisonburg
(Verizon South or GTE), Harrisonburg, Virginia

Piedmont Telephone Company November 13, 1957
Manassas, Virginia

American Telephone and Telegraph Company of Virginia January 27, 1958
Washington, D.C.

Central Telephone Company of Virginia May 6, 1958
Lee Telephone Company
(CenturyLink, Embarq or Sprint-Atlantic Telecom), Martinsville, Virginia

Appalachian Power Company June 17, 1958
(American Electric Power), Roanoke, Virginia

Central Telephone Company of Virginia October 7, 1959
Southern Telephone Company
(CenturyLink, Embarq or Sprint Mid-Atlantic Telecom), Charlottesville, Virginia

Harrisonburg Electric Commission Harrisonburg, Virginia	April 3, 1961
Delmarva Power and Light Company Salisbury, Maryland	January 7, 1963
Northern Piedmont Electric Cooperative Culpeper, Virginia	April 23, 1965
First Colony Telephone Company	February 27, 1967
Continental Telephone Company of Virginia (Verizon South or GTE), Emporia, Virginia	January 22, 1969
Old Dominion State Telephone Company Emporia, Virginia	January 22, 1969

2.8 STATUTORY RIGHTS

There are utilities that enjoy a statutory right to receive reimbursement for relocation when they are located on VDOT rights of way. These statutory rights are enumerated in the Code of Virginia. The following table provides a list of the Statutory Rights and the section of the Code of Virginia where they can be found.

STATUTORY RIGHTS

Owner	Interstate Project in a City/ Town	Interstate Project in a County	Primary Project	Urban Project	Secondary Project	State Toll Revenue Bond Project
Investor Owned Utility	33.2- 307	NONE	NONE	NONE	NONE	33.2-1701
County Owned Electric/ Gas	33.2- 307	33.2-308	33.2-308	NONE	33.2-330	33.2-1701
County Owned Water/ Sewer	33.2- 307	33.2-308	33.2-308	NONE	33.2-330	33.2-1701
City/ Town Owned Electric/ Gas	33.2- 307	NONE Electric/ 33.2-308 Gas	NONE Electric/ 33.2-308 Gas	33.2-348	33.2-330	33.2-1701
City/ Town Owned Water/ Sewer	33.2- 307	33.2-308	33.2-308	33.2-348	33.2-330	33.2-1701
Authority /District Owned Water/ Sewer	33.2- 307	33.2-308	33.2-308	33.2-348	33.2-330	33.2-1701
CATV Facility	NONE	NONE	NONE	NONE	NONE	NONE

* PPTA projects fall under the system for the type of project contemplated

2.9 OTHER RULINGS AND STATUTES

2.9.1 RULINGS

In a ruling by the Court involving Stuarts Draft Water Company, it was held that the water company's dormant easement, although located within an existing public road, did not require compensation to the water company when the grade of road was lowered. The water company did not prove a compensable right in the eyes of the court for necessary improvements to the rural road. It was held that the water company easement did not constitute property that could not be taken without compensation.

2.9.2 STATUTES

a. §33.2-105 EVIDENCE AS TO EXISTENCE OF PUBLIC ROAD

When a way has been worked by road officials as a public road and is used by the public as such, proof of these facts shall be prima facie evidence that the same is a public road. And when a way has been regularly or periodically worked by road officials as a public road and used by the public as such continuously for a period of twenty years, proof of these facts shall be conclusive evidence that the same is a public road. In all such cases the center of the general line of passage, conforming to the ancient landmarks where such exist, shall be presumed to be the center of the way and in the absence of proof to the contrary the width shall be presumed to be thirty feet.

This statute was originally enacted in the colonial days to establish the width of all public roads in Virginia as thirty feet wide unless the county

court ordered it to be less. The language was gradually modified to that appearing in the present Code.

b. §56-1 CABLE TELEVISION FACILITIES

This section of the Code of Virginia indicates that cable television companies are not required to incorporate as public service companies and at the present time, no television cable company has been incorporated as a public service corporation. Therefore, it is the opinion of the Attorney General's Office that the relocation and adjustment of television cable facilities resulting from highway projects shall be treated as business until such time as television cable company can show reason why it should be considered a public utility.

c. §56-265.14 THROUGH §56-265.32 UNDERGROUND UTILITY DAMAGE PREVENTION ACT

These sections of the Code of Virginia, as amended, require all persons performing excavation and/or demolition to notify the notification center at 811.

Time frames and actions to be taken by the person performing the excavation or demolition, the notification center and the owner(s) of the underground utility are outlined in these sections of the code.

This statute requires utility owners/operators to participate in Pre-Planning and Pre -Construction Conferences scheduled by VDOT.

d. §33.2-1014 ACQUISITION OF UTILITY EASEMENTS

This section of the Code of Virginia, as amended, provides for VDOT to acquire through gift, purchase or by exercising its power of eminent domain, additional land or easement, right of way, or interest in land adjacent to or approximately adjacent to such land needed and proposed to be acquired for a transportation project and may then convey the same to the utility owner(s) as a replacement for an existing easement. Documentation of an existing recorded easement must be provided. Otherwise, VDOT will relocate the utility owners' facilities into a VDOT Utility Easement or within the existing right of way. Relocation to a proposed VDOT Utility easement area shall only occur when necessitated by proposed construction activities.

e. §11-62.1 THROUGH §11-62.11 PROMPT PAYMENTS

These sections of the Code of Virginia, as amended, requires every state agency that acquires goods or services, or conducts any other type of contracted business with non-governmental, privately owned enterprises shall promptly pay for the completely delivered goods or services by the required payment date. The procedure to establish payment due dates for utility company invoices is covered in Section 13.3.1 of this manual.

f. §59.1-406 THROUGH §59.1-414 OVERHEAD HIGH VOLTAGE LINE SAFETY ACT

These sections of the Code of Virginia were enacted to promote the safety and protection of persons engaged in work activity in the vicinity of

overhead high voltage lines (all above ground bare or insulated electrical conductors of voltage in excess of 600 volts). The conditions under which work may be carried on safely and provides for the safety arrangements to be taken when any person engages in work or other activity in proximity to overhead high voltage lines are outlined in these sections of the code.

CHAPTER 3

COST RESPONSIBILITY

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CHAPTER 3

COST RESPONSIBILITY

3.1 GENERAL

Every effort has been made to develop procedures as reasonable as possible for determining cost responsibility to eliminate judgmental decisions. Nonetheless, it is assumed that any unintentional inequity in a singular adjustment will balance out over a period of time when repetitive adjustments are made with a particular utility owner.

In the event an inequity is encountered in an isolated case where frequent repetitive adjustments are not made with a particular utility owner, the facts may be re-examined and a fair determination will be made in accordance with existing policies, procedures and laws.

The compensable right status of the facility and whether or not the facility is in conflict and must be relocated is the key to determining the cost responsibility. A facility that is relocated but is not in conflict will not be used to determine cost responsibility or the pro-rate. Section 7.3.2 provides guidelines for identifying a utility conflict.

Currently there are two methods used to determine cost responsibility, number of poles/length of facility (section 3.2) and unit cost (section 3.3).

3.2 NUMBER OF POLES/LENGTH OF FACILITY METHOD

Form UT-9 (Appendix 4) is primarily used by VDOT in making the cost responsibility determination for utilities, and to document the project's cost responsibility for each utility facility requiring relocation.

All existing facilities that are located within the proposed right of way limits and project termini, including construction easements are to be identified on the UT-9. A separate

UT-9 is required for each utility owner even though their facilities may be attached to the same pole.

Although all poles are to be shown on the UT-9, brace poles, guy poles, and guy wires will not be used in the formula to determine cost responsibility, unless the guy facilities are the only items in conflict, and then the location of the guy facilities will determine the cost responsibility. In addition, street light poles that carry only the electrical conductors necessary to supply electricity to the lighting system will not be used in the cost responsibility determination (see Section 15.3 Adjustment of Roadway Lighting).

On projects where there are existing aerial and direct buried utilities owned by the same utility owner, the direct buried utilities may be converted to theoretical aerial utilities to determine the cost responsibility prorate. This conversion is made by dividing the length of the buried facility by the average span length of a similar aerial facility to determine an equivalent number of poles. Conversely, the span lengths supported by poles can be converted to a theoretical length of direct buried facility to determine the cost responsibilities prorate.

Example:

A transportation project has an existing aerial telephone cable located on one side of the roadway and a direct buried cable on the other side of the roadway. There are 29 poles for a total distance of 4000 linear feet of aerial telephone cable. The direct buried cable is 1385 feet long. The direct buried telephone cable can be converted as follows:

Total length of aerial facility = 4000 linear feet

Total number of poles = 29

4000/29 = 138 linear feet = average span length

Theoretical number of poles1385/138 = 10 poles

By converting the direct buried cable to a theoretical aerial cable, the total pole number on the project is increased from 29 to a total of 39 theoretical poles and the project prorate will be based on the 39 poles if all poles and underground utility facilities are in conflict (See Section 3.2.1 for cost responsibility formula).

Overhanging appurtenances such as cross-arms, insulators, spans of wire, etc. are not to be included on the UT-9. The cost to adjust these types of appurtenances will be based upon the overall cost responsibility determination of the relocation.

There are instances where the poles of an aerial roadway crossing are located outside of the project right of way and easements and are not in conflict; however, the cables/conductors are in conflict with the proposed transportation project. Should this be the case, and only the conductors/cables are in conflict with the grade of the road or the ability to construct the project in a safe manner, it will be necessary to use the length of span within the project right of way and easements, and prorate it in accordance with its compensable rights. When this situation occurs, the location and length of aerial crossing should be shown on UT-9.

The lengths of each existing underground utility within the project limits (project termini and proposed right of way) shall be measured or scaled from the roadway plans and shown on the UT-9. Although the sizes of the underground utilities are indicated on the UT-9, no weight is given to the sizes in this cost responsibility method. The

appurtenances of the underground utility such as manholes, valves, pedestals, etc. are not normally shown on the UT-9 nor included in the cost responsibility determination.

When a state statute requires the project to pay 100% of the non-betterment cost, a statement of cost responsibility will suffice in lieu of a UT-9. However, when the UT-9 is not used, the Regional Utilities Manager or designee should make a list of all utility conflicts to document the project files. This list should be used to review the plan and estimate and/or to create a scope of services for a consultant-engineering firm that will design the utility relocation plans.

The Regional Utilities Manager or designee should include the statement of cost responsibility in a memorandum to the State Utilities and Property Manager. An example of cost responsibility statement is:

> It has been determined that 100 percent of the non-betterment cost to relocate the existing facilities of (Utility Owner) found to be in conflict with project (Project Number) is to be borne by the project by virtue of Section (Section Number) of the Code of Virginia as amended.

3.2.1 NON BETTERMENT COST RESPONSIBILITY FORMULAS

The following formula is used when computing the Project's percentage of cost, using the pole/length method. The formula should be computed separately for each individual utility owner.

NO. OF POLES IN CONFLICT THAT HAVE A COMPENSABLE RIGHT	**X 100 =**	**PERCENTAGE OF COST TO BE BORNE BY THE PROJECT**
NO. OF POLES IN CONFLICT WITHIN PROJECT LIMITS		

Example:

A total of 28 poles are found within the limits of the project. Of these 28 poles, 22 are in conflict with the project and must be relocated. There are 8 of the 22 poles located on VDOT right of way under a revocable permit and 14 of the poles have a compensable right. The following is a determination of non-betterment prorate:

$\frac{14}{22}$	**x**	**100**	**=**	**63.6%**	**Project Cost**
$\frac{8}{22}$	**x**	**100**	**=**	**36.4%**	**Utility Owner Cost**

In this example, it may be necessary to relocate more than the 22 poles that are in conflict, to provide a well-engineered non-betterment relocation that will provide a good alignment and proper tie-in point (this is to be agreed upon by both VDOT and the utility owner). Whenever this is the case, the prorate is computed using only those poles that are in direct conflict and is to be applied to the total relocation cost, including the poles that are relocated that are not in direct conflict with the construction project. Only the 22 poles in actual conflict will be used to determine the cost responsibility prorate.

The percentage of cost is to be rounded off to the nearest one tenth of a percent.

The same formulas are to be used to compute the Project and Utility Owner share for underground facilities by substituting the length of facility for the number of poles.

3.3 UNIT COST METHOD

The unit cost method is best used when:

a. The utility work is included in the VDOT construction contract with the work performed by the VDOT contractor (in plan work) and the cost is to be shared between VDOT and the utility owner;

b. Betterment has been included in the relocation work performed by the utility owner; and,

c. There are different types of facilities owned by the same utility owner, such as aerial cable, direct bury cable, and underground conduit system on the same project. In this case the unit cost method is to be used estimating cost and not to determine the cost responsibility.

For all in plan work and specific cases deemed appropriate by the Regional Utilities Manager or designee, a list of items or length of facilities in conflict may be prepared by the unit cost method.

The method of computation used in the unit cost method is the cost analysis method.

3.3.1 COST ANALYSIS

a. IN PLAN WORK

The cost analysis method uses current estimated costs, which are assigned to a unit of the proposed relocated utility. These costs, multiplied by the number of units are then separated into project and utility owner costs. One column is for the units that have been determined to be project cost and the second column is for those units that have been determined to be the utility owner's cost, based upon the

UT-9. If there is no betterment involved in the relocation work, the following formula should be used to determine the percentage of cost to be borne by the project and the percentage of cost to be borne by the utility owner. The percentage is to be rounded-off to the nearest one tenth of a percent.

$$\frac{\textbf{TOTAL COST TO BE BORNE BY THE PROJECT}}{\textbf{TOTAL COST OF COMPLETE ADJUSTMENT}} \times 100 = \textbf{PERCENTAGE OF COST TO BE BORNE BY THE PROJECT}$$

Likewise, the percentage of cost to be borne by the utility owner is computed in a similar manner, substituting total cost to be borne by the utility owner for total cost to be borne by the project.

These percentages will be used to determine cost to be borne by the utility owner based on estimated prices for the respective bid items. The cost to each party will be actual cost times these percentages.

Example:

An investor owned 16 inch waterline is in conflict for approximately 2000 linear feet and meanders on and off the VDOT right of way. The adjustment of this waterline will be included in the transportation project. Using the UT-9, the following was ascertained:

Example

On R/W w/out Prior Rights Utility Cost			Off R/W On Utility Easement Project Cost		
868' of 16" DI WM @ $53/ft.	=	46,004	1375' of 16" DI WM @ $53/ft	=	72,875
106' of 6" DI WM @ $24/ft	=	2,544	28' of 6" DI WM @ $24/ft	=	672
4 Fire Hydrant @ $857/ea	=	3,428	1 Fire Hydrant @ $857/ea	=	857
4-16" Branch @ $125/ea	=	500	1-16" Branch @ $125/ea	=	125
2-16" Butterfly Valve Box @ $3200/ea	=	6,400	3-16" B.F.V&B @ $3200/ea	=	9,600
4-6" GV&B @ $800/ea	=	3,200	1-6" GV&B @ $800/ea	=	800
			900' - 3/4 W.S.L. @ $20/ft	=	18,000
Sub-Total Estimated Utility Cost	=	62,076	Sub-Total Estimated Project Cost	=	102,929

Total Estimated Cost 62,076 +102,929 = 165,005

102,929 x 100 = 62.4% Project Cost
165,005

62,076 x 100 = 37.6% Utility Cost
165,005

Whenever betterment is included in the utility work, the total cost to be borne by the project is divided by the total costs **with betterment** for the complete adjustment, as shown in the following formula.

TOTAL COST TO BE BORNE BY THE PROJECT / TOTAL COST OF COMPLETE ADJUSTMENT (WITH BETTERMENT) X 100 = PERCENTAGE OF COST TO BE BORNE BY THE PROJECT

This method is used primarily when the utility work is included in the highway contract.

In the previous example, no betterment was included in the waterline relocation; however, in this example the utility owner is requesting an extension of the existing 16 inch waterline to the end of the VDOT project. This extension consists of:

Example

1424' of 16" DI Watermain @ $53/foot	**=**	**75,472**
4-16" BFV&B @ $3200/each	**=**	**12,800**
40' of 6" DI Watermain @ $24/foot	**=**	**960**
2 Fire Hydrants @ $875/each	**=**	**1,750**
2 - 16" Branch @ $125/each	**=**	**250**
2 - 6" G.V. & B. @ $800/each	**=**	**1,600**
438' - 3/4" W.S.L. @ $20/foot	**=**	**8,760**
Total Estimate Cost of Betterment	**=**	**$ 101,592**
Total Cost of Complete Adjustment with Betterment		
101,592 +165,005	**=**	**$ 266,597**

Estimated Project Cost **102,929 x 100 = 38.6% project cost**
Total Cost of Complete Adjustment with Betterment **266,597**

The 38.6% is the percentage of cost of the waterline work, including betterment, the project is to bear.

b. WORK BY UTILITY OWNER

It is sometimes difficult to determine betterment cost when a utility owner is performing the adjustment work with its own forces or by a contract awarded by the utility owner. This is especially true when the replacement facility is different from the existing facility that has to be relocated and on which the cost responsibility was determined.

It is necessary to prepare the UT-9 for the existing utilities and to determine the units that have a compensable right. In addition to the plan and estimate for the "planned" adjustment, the utility owner must also prepare a conceptual plan and estimate for the theoretical "replacement in kind." Both estimates are calculated using current costs. If for any reason there is no current cost available for any of the existing utility items, the cost should be adjusted from the year of the latest available cost for inflation.

The project cost responsibility percentage as determined by the UT-9 (See Section 3.2) is then applied to the "replacement in kind" estimate to compute an estimated "in-kind cost." A plan and estimate is prepared by the utility owner for the “planned” replacement facility, which may include betterment. The estimated "in-kind" project cost is then divided by the estimated cost of the "planned" adjustment. This determines a percentage of the "planned" adjustment cost (with betterment) which the project is to bear. The formula is as follows:

ESTIMATED COST TO REPLACE IN KIND	**X**	**% OF COST TO BE BORNE BY THE PROJECT**	**=**	**ESTIMATED PROJECT COST OF REPLACEMENT IN KIND**

ESTIMATED PROJECT COST OF REPLACEMENT IN KIND / ESTIMATED COST OF TOTAL ADJUSTMENT WITH BETTERMENT	**x 100**	**=PERCENTAGE OF COST OF PLANNED ADJUSTMENT WITH BETTERMENT THE PROJECT WILL BEAR**

Example:

The non-betterment project pro-rate has been determined to be 63.6% (See Example Section 3.2.1). The non-betterment theoretical cost is estimated to be $427,580, of which the project is responsible for $271,941 ($427,580 x 63.6%).

The utility owner has included betterment in the “planned” adjustment. The estimated cost of the “planned” adjustment, with betterment is $684,541. Therefore, the pro-rate would be:

$\frac{271,941}{684,541} \times 100$	=	39.7%	Percentage of cost of planned adjustment with betterment for which the project will be responsible

3.4 RIGHT OF WAY USE FEE

The Right of Way Use Fee is a result of legislation enacted by the 1998 General Assembly (HB-957, SB-577) and was effective July 1, 1998. It applies only to certificated providers of telecommunications services. The relevant sections of State Code are §56-468.1, §56-§468.2, §56-458, and §56-462. These Sections can be found in Appendix 32, 33, 34, and 35 respectively.

The Right of Way Use Fee is added to the telephone customer's monthly bills. It is shown as a Public Right of Way fee and is a minimum of $.50 per month per access line.

VDOT calculates the new rate to be charged annually based on the formula included in §56-468.1. The purpose of these charges is to recover the increased maintenance and construction costs that result from the presence of the utilities in or along the roadways.

The fees collected by the certificated telecommunications providers in the 97 counties where VDOT maintains the roads is paid to VDOT and then distributed back to those counties as a part of the Secondary Road Fund. The two remaining counties, along with the cities and towns that maintain their own roads system must chose to participate in collecting any Right of Way Use Fees. The fees collected in these two counties, and the participating cities and towns, are paid directly to the county, city, or town.

VDOT, counties, and localities, that collect the Right of Way Use Fee cannot charge any other fee to certificated telecommunication providers such as permit fees, inspection fees, processing or handling fees, franchise fees, etc.

New installations are defined as new pole lines, new conduit systems and direct burying new cables that have been installed after July 1, 1998. New installations do not include adding new cables to existing poles or conduit systems. This definition has an impact on

the annual reporting required by the providers and what relocations are covered as reimbursable.

Reimbursements shall be received from either (i) the locality that granted the permit or franchise to use such right-of-way or (ii) the Commonwealth Transportation Board if the road or street is in the State Highway System or the secondary system of state highways:

3.5 RIGHT OF WAY USE FEE REIMBURSEMENT

Reimbursements for relocation costs are as follows. For years 1 through 3 after a new installation, the provider is to be reimbursed 100% of eligible costs for the relocation. For years 4 through 6, they are reimbursed 50%. For years 7 and beyond, the relocation is at no cost to our projects

The certificated telecommunications provider must provide VDOT a copy of the applicable permit covering the facilities to be relocated in order to claim Right of Way Use Fee reimbursement. The amount of relocation reimbursement in any fiscal year to be reimbursed under the Right of Way Use Fee shall not exceed the amount of Public Right of Way Fees received by that locality either directly or through its secondary road fund apportionment in the preceding year. If this apportioned amount would be exhausted on a relocation project where two or more certificated providers are eligible for reimbursement, then the apportioned amount shall be shared by those eligible providers by prorating the reimbursement based on what each provider would be entitled to, absent the limited apportionment.

3.6 EXAMPLES

Examples follow.

1. An electric company has an existing pole line along and inside VDOT right of way in a county that VDOT maintains all roads. A certificated telecommunications provider installs a cable on the power company's pole line. There are no other telephone cables attached to the pole line. One year later due to a road improvement, the pole line must be relocated.

   VDOT will not have to pay for the relocation costs of the provider's facilities because Section 56-468.1 specifically excludes the addition of new cable to existing pole lines and conduit systems from the definition of new installations. If this line were along an Interstate, Section 33.2-307 would require VDOT to pay for the eligible relocation costs

2. An electric company has an existing pole line along and on a VDOT right of way. There is a telecommunication pole line along and on VDOT right of way on the other side of the roadway that has been in place for three years. A second telecommunications cable is installed on the power company poles. One year later a VDOT road improvement requires the relocation of both pole lines.

   VDOT will not have to pay for the relocation cost of the telecommunication cables of both providers on the power company pole line. If the telecommunication pole line was installed prior to July 1, 1998, VDOT would not be responsible for the relocation costs. If it was installed on or

after July, 1 1998, VDOT must pay the applicable percentage of the eligible relocation costs according to the 100%, 50%, or 0% restrictions based on permit issue date.

3. A certificated telecommunications provider's conduit system has existed on VDOT right of way for six years. The provider direct buries a new cable alongside the conduit system. A new certificated provider also installs a new cable in the duct system. One year later a VDOT road improvement requires the relocation of the conduits and direct buried cable.

   VDOT will not have to pay for the relocation cost of the facilities located in the conduit system. VDOT will be 100% responsible for the eligible relocation costs on the direct buried cable.

The date of the UFI will be used to determine the certificated provider's eligibility for reimbursement of the eligible relocation costs. This date will also be used by VDOT to prioritize multiple eligible projects on a first come first served basis for reimbursement.

CHAPTER 4

PROJECT INITIATION

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CHAPTER 4

PROJECT INITIATION

4.1 GENERAL

The Regional Utilities Manager's or designee's office is not normally involved in the initiation of a transportation project, but is called upon to provide various information during the project development process and to assist in the scoping of a project. This chapter briefly covers the stages of the project initiation that are important to the utility relocation process.

4.2 SCHEDULING OF TRANSPORTATION CONSTRUCTION PROJECTS

The Virginia Department of Transportation (VDOT) transportation projects are constructed using various types of construction funds. These funds are distributed/allocated to the transportation projects shown on VDOT's Six Year Improvement Program. The Six Year Improvement Program is developed after receiving input at public hearings held annually in each of the nine transportation construction districts. At these public hearings, input is received from citizens of the Commonwealth, as well as from members of the General Assembly, members of the county board of supervisors, city council members, and other public officials.

The projects that are in the Six Year Program are then eligible to be included in the Long Range Advertisement Schedule. This is a schedule that provides more detailed information regarding the project such as the limits of the project and which quarter of the year advertisement is planned. The Long Range Schedule normally covers a period of time from 18 months to 3 years in the future.

From this schedule, the Short Range Advertisement Schedule is developed. The Short Range Schedule covers the period from the present to 18 months in advance. This schedule provides the date of advertisement as well as the type of construction funding that will be used.

The short and long-range schedules are distributed by VDOT's State Utilities and Property Manager and/or the Regional Utilities Manager or designee to various utility owners operating in Virginia. These schedules are to be used by the utility owners to forecast their manpower needs to meet VDOT's planned construction program. It is essential that the utility owners have manpower and resources available to meet VDOT's schedules or retain outside contractors and engineers. The procedures for reimbursement of these costs will be outlined in later chapters of this manual.

In addition to the planned projects, each VDOT District schedules for No-Plan Projects and Maintenance Projects, i.e., Selected Advance Advertisement Project; (SAAP), Maintenance Projects, etc. The planned date of advertisement for these types of projects is subject to change more often than those on the short range schedule.

4.3 UTILITY INVENTORY

During the scoping of a proposed project by VDOT, the Regional Utilities Manager or designee is to review the project site and determine what utilities exist within the project limits. The Regional Utilities Manager or designee should also determine the utility owners that are involved and input this information in RUMS. It is the District's No Plan (Maintenance) Project Coordinator's responsibility to input this information into RUMS for No Plan/Maintenance projects.

4.4 PROJECT SURVEY AND DESIGNATING

After the funding of a project, the first fieldwork to be undertaken by VDOT will be the survey. This may entail photogrammetry on some projects. During the ground survey, all visible utilities (poles, gravity sanitary sewer manholes and cleanouts, fire hydrants, water meters, valve boxes, etc.) will be located. The data obtained during the ground survey will include pole numbers/owners and the top and invert elevations of the sanitary sewer manholes located within the project limits including streets and other side connections, as well as the next sanitary sewer manhole located outside of the project limits. Distances between the manholes as well as invert elevations are needed to determine conflicts within the project limits.

When plans with survey centerline are available, underground utility designation is authorized. VDOT has statewide contracts with Subsurface Utility Engineering (SUE) consultants to designate (obtain the horizontal location of) the existing underground utilities. The utility designation does not include obtaining information on gravity sanitary sewers, which is secured at the time of ground survey.

All projects that have water, gas, sanitary sewer force mains, underground electric, telephone, catv, etc. will be designated. It shall be the' Regional Utilities Manager or designee's responsibility to coordinate with the Project Manager or Location and Design Engineer to ensure that designating services have been ordered on all projects with underground utilities. The SUE consultant will provide the data in digital format and plot the horizontal location of the underground utilities on plan sheets. The data will be included in the transportation plans.

4.5 PRELIMINARY UTILITY RELOCATION COST ESTIMATE

Usually one of the first involvements the Regional Utilities Manager or designee has on a transportation project is assisting in the scoping of the project and providing a Preliminary Utility Relocation Cost Estimate. The Regional Utilities Manager or designee normally receives the request for a preliminary utility cost estimate from the Project Manager or the Location and Design Division (L&D).The estimated utility relocation cost is to be entered into PCES and/or Scoping Report and submitted for inclusion into the total right of way estimate. RUMS should be updated to include the preliminary utility cost estimate information. These estimates are used to allocate funds to the project as well as make various VDOT Divisions aware of anticipated cost, which may influence the decisions regarding the size and scope of the project.

Preliminary plans and/or maps are furnished to the Regional Utilities Manager or designee showing as much information as possible regarding the proposed transportation project. These plans do not always indicate the presence of utility facilities on the project; therefore, in all instances it will be necessary for the Regional Utilities Manager or designee to review and inventory the project site to determine the utility involvement and impact to both the utility owners and the transportation project.

The Regional Utilities Manager or designee may also meet informally with the various utility owners to ascertain the location of the facilities and the type of material used in the construction of the underground utilities (asbestos, terra cotta, etc.) and the history of any maintenance on the utility. This information will be needed to determine if the utility must be relocated in order to complete the preliminary utility cost estimate and it will also be used later to determine where test holes are needed. (Locating underground utilities test holes will be discussed in detail later in this manual.)

For the purpose of preparing the preliminary utility cost estimate, all underground utilities should be considered to be in conflict when sufficient data is not available to make a positive conflict determination.

The preliminary cost estimate is a "Broad Gauge" cost and is subject to revisions as plans are further developed. It is best for each Regional Utilities Manager or designee to develop their own records of cost to be used in preliminary cost estimating due to the wide ranges of cost to relocate the same type of facility in different transportation construction districts.

All information obtained at the time of the Preliminary Utility Cost Estimate is to be placed in PCES and RUMS by the Regional Utilities Manager or designee. All working notes are to be retained as a part of the official project records and files.

4.6 COORDINATION DURING PRELIMINARY DESIGN

After the preliminary utility relocation cost estimate has been furnished to the appropriate person, contact and lines of communication between the project designer, Project Manager and the Regional Utilities Manager or designee should be maintained. By doing this, major impacts to the existing utilities and subsequent costly relocations can be held to a minimum.

The Regional Utilities Manager or designee should involve the utility owners as the need occurs, and keep them informed on the status of project development.

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CHAPTER 5

PROJECT FIELD INSPECTION

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CHAPTER 5

PROJECT FIELD INSPECTION

5.1 GENERAL

The Project Management Office (PMO)/Location and Design Division (L&D) of the Virginia Department of Transportation (VDOT) or a consulting engineering firm under their supervision will develop design plans to the Project Field Inspection stage. This chapter covers the activities involved in the utility relocation process during this phase of plan development.

5.2 UTILITY LOCATION AND EVALUATION

Further development of the preliminary plans by the project designer after receiving the utility designation (horizontal location) information from the Subsurface Utilities Engineering (SUE) consultant, may result in the shifting of the centerline, grades, drainage facilities, walls, etc., to avoid horizontal conflicts. Once preliminary locations for the drainage items, walls, bridge foundations, signal pole/controller foundations, illumination standards, noise barriers, etc. have been shown on the project plans, locating services (test holes information) is required to determine utility conflicts.

In evaluating where and when test holes should be taken, L&D IIM-LD-140.8 or the latest revision is to be followed. In addition, the Regional Utilities Manager or designee/ State Utilities and Property Manager should be knowledgeable of any plans by the utility owner to upgrade, replace, discontinue, etc. an existing underground utility that would render the test hole information useless. Test holes should not be taken in cuts or deep fill areas nor at locations of large drainage or other planned structures where it is apparent that the underground utility must be relocated.

The project designer will contact the Regional Utilities Manager or designee to review locations where test holes should be taken when the project is being designed or coordinated in the district. When the project is being designed or coordinated in the Central Office, the project designer will review the test hole requirements with the State Utilities and Property Manager's office.

On projects where the utility pipe material is asbestos-cement or cast iron with lead joints, careful attention is to be given to the amount of additional cover being placed over the pipe and to the depth of cut to sub grade over the pipe. Normally, it is not necessary to have test holes taken when there is an additional 5 feet of fill to be placed over the pipe or when the proposed sub-grade or bottom of undercut will be less than 2 feet from the top of the pipe. In most instances, these utility pipes will be relocated regardless of conflicts with other project construction features. Of course each project and each utility facility must be reviewed on their own merits.

5.3 MAJOR FACILITY IMPACTS

After the Preliminary Design Plans are updated to approximately 30% complete, the District Project Manager schedules a Project Field Inspection. The assigned Project Manager will schedule and conduct the Project Field Inspections on urban projects.

The field inspection plans will include plan, profile, cross section, maintenance of traffic, sequence of construction, general notes, typical sections, drainage information, underground test hole information and a survey of overhead electrical conductors near large drainage structures, bridges, etc. The Regional Utilities Manager or designee should review the Project Field Inspection Plans to determine if modifications to the plans can be recommended to lessen or eliminate impacts to utilities. A detail review of the typical sections, cross sections, and the preliminary plans for the bridge, signal and lighting facilities, is necessary to reveal the total impacts on the existing utilities. Special

attention is to be given to the constructability of the project. The existing overhanging utilities, and in particular the electrical conductors and supports, should be studied to determine if cranes, drag lines and other large pieces of equipment can construct the project safely without endangering personnel and equipment.

Major changes to the proposed roadway plans should be considered and suggested in writing to the Project Manager with copies to the State Utilities and Property Manager by the Regional Utilities Manager or designee in instances where impact to existing sewage or water pumping stations, electrical sub-stations, telephone switching stations, or large underground utilities may occur.

5.4 PRELIMINARY UTILITY EASEMENT

The necessity of showing preliminary utility easements on the plans to be used at the Public Hearing will be discussed at the Project Field Inspection. Preliminary utility easements or a note referring to the future need for utility easements must be shown on the Public Hearing Plans. If the decision is made to have the preliminary easements shown at this time, the project designer will furnish the Regional Utilities Manager or designee the required sets of prints\electronic files along with a written request to develop the preliminary utility easements. The date this information is to be returned will be provided at the time of the request.

When a decision has been made not to include preliminary utility easements on the plans, the appropriate plan note, as outlined in VDOT Road Design Manual is to be shown on the plans for the willingness or public hearing.

When required, the approximate location of preliminary utility easements should be determined by the Regional Utilities Manager or designee and delineated on willingness or public hearing plans. The decision to include preliminary utility easements is made at

the scoping and project field inspection stage in accordance with the guidelines in VDOT Road Design Manual.

5.5 ATTENDANCE AT THE PROJECT FIELD INSPECTION

The Regional Utilities Manager or designee will attend all project field inspections. A written report providing comments, concerns and/or recommendations from a utility standpoint is to be sent to the District Project Manager and Project Management Office. The written report will confirm the comments provided in person at the Project Field Inspection Meeting. Should it be impossible for the Regional Utilities Manager or designee or their representative to attend, the written report should be sent in time to be reviewed at the project field inspection meeting.

5.6 GENERAL CONCEPTUAL CONSIDERATIONS

The Regional Utilities Manager or designee in reviewing the project site prior to the project field inspection should become knowledgeable of the existing utilities and how they relate to the project such as:

a. Are the existing utilities the major lines for that area? ;

b. Are there alternate routes that can be used to provide utility services to the project area during construction? ; and,

c. Can the utility be relocated independent of the project construction or is the utility relocation dependent upon portions of the project being constructed first?

This information is important in determining what actions need to be taken by the utility owners and VDOT prior to, or during project construction. The input of utility information during this stage allows project development that will minimize damage and interruptions

to the utilities and will help eliminate conflicts and coordination problems with the project contractor operations.

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CHAPTER 6

PREPARATION FOR UTILITY FIELD INSPECTION

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CHAPTER 6

PREPARATION FOR UTILITY FIELD INSPECTION

6.1 GENERAL

This chapter outlines the general requirements in preparing to conduct a utility field inspection. It is the responsibility of the Regional Utilities Manager or designee to determine the extent of utility involvement within each project and proceed according to the requirements set forth in this manual.

Guidelines for preparing and conducting the utility field inspection are found in Appendix 2 and 3.

Procedures for furnishing utility field inspection plans, and the Utility Designation and Utility Location (Test Hole) information are found in IIM-LD-140.8, or its latest revision.

6.2 UTILITY FIELD INSPECTION PLANS

After the Project Field Inspection recommendations have been evaluated and the necessary changes have been incorporated into the plans, the utility field inspection plans, which include the elimination of utility conflicts where feasible, are provided to the Regional Utilities Manager or designee by the Location and Design Division or Project Manager. The Regional Utilities Manager or designee may then proceed with the utility field inspection process.

The utility field inspection plans are distributed to the Regional Utilities Manager or designee by the Location and Design, Division using Form LD-428 included in IIM-LD-140.8 and in accordance with IIM-LD-68.20, or its latest revision.

The utility field inspection plans are to include the following when applicable:

a. Plan sheets showing roadway design, profiles and appropriate typical sections;

b. Underground Utilities Test Hole Information Sheet;

c. Right of Way data sheet;

d. Preliminary plans for bridges and retaining walls;

e. Preliminary plans for traffic signals and lighting;

f. Cross sections;

g. Drainage Information;

h. Storm water management plan;

i. Survey of overhead utility lines when a major structure is involved;

j. Sequence of construction;

k. Maintenance of traffic/Traffic Management Plan; and,

l. General Notes.

m. Sound walls

n. Temporary Detours for construction

6.3 CONFLICT EVALUATION AND DETERMINATION

Prior to the utility field inspection, the project plans will be examined in detail by the, Regional Utilities Manager or designee and the scope of the project evaluated for the purpose of determining utility conflicts.

Guidelines for identifying issues to be considered while preparing for the utility field inspection are found in Appendix 2 and 3.

The individual preparing for the utility field inspection will make an on the ground inspection and an inventory of the utilities within the project. It may be necessary to consult with the utility owners during this phase of the project to ascertain the location of underground utilities, the type and size of the utility facilities, the depth of the underground facilities, and other information needed to properly prepare for the utility field inspection.

The evaluation shall take into consideration both the aerial and underground utility facilities. During the evaluation process, the project plans are to be marked and color-coded to identify the various types of utility facilities within the project limits.

Under §56-265.17.1, each project designer (see §56-265.15 for the definition of designer) can contact Miss Utility (811) to assist them in gathering utility line information for a project. Under §56-265.19, the utility operator shall participate in all pre-planning and pre-construction meetings originated by state, county, or municipality.

To avoid confusion and provide a common standard for all projects throughout the State, the Underground Utility Damage Prevention Act mandates that underground utility facilities be indicated on the ground surface by using specific paint colors. The identifying colors for various utility facilities are as follows:

UTILITY AND TYPE	IDENTIFYING COLOR OF PRODUCT OR EQUIVALENT
Electric Power Distribution & Transmission	Safety Red
Municipal Electric Systems	Safety Red
Gas Distribution & Transmission	High Visibility Safety Yellow
Oil & Petroleum Products Distribution & Transmission	High Visibility Safety Yellow
Dangerous Materials, Product Lines, Steam Lines	High Visibility Safety Yellow
Telecommunications Systems	Safety Alert Orange
Police & Fire Communications	Safety Alert Orange
Cable Television	Safety Alert Orange
Water Systems	Safety Precaution Blue
Slurry Systems	Safety Precaution Blue
Sewer Systems	Safety Green

The project plans may be color-coded using the colors as required by the Underground Utility Damage Prevention Act to indicate the utility facilities located within project limits.

When it is known that consultants will be used to design utility relocation plans a written report to document the files must be prepared identifying the utility conflicts. This documentation will be used as support for approving the scope of services proposed by the consultant. The report should be prepared at the utility field inspection phase and updated, if required, during or after the utility field inspection.

When utility facilities have been omitted or incorrectly shown on the project plans, the Regional Utilities Manager or designee must initiate steps with the Location and Design Division to have corrections made to the plans, including additional survey if needed.

6.3.1 AERIAL UTILITY FACILITIES

The review of project plans for conflicts shall take into consideration the proximity of the utility facility to construction, vertical and horizontal clearances, and other proposed roadway features to assure that the requirements of VDOT's Utility Accommodations Policy, Overhead High Voltage Line Safety Act, National Electric Safety Code, VDOT's Clear Zone, OSHA and other Federal or State safety requirements are met. Aerial utility facilities that do not meet these requirements shall be considered to be in conflict and relocated. Section 7.3.2 provides more detailed information to identify utility conflicts.

Notes are to be kept to indicate the name of the utility owner, pole ownership, pole numbers, attachments by other (joint use) utility owners, and cost responsibility determination.

Additional references to aerial utility involvement may be found in the following sections of this manual:

a. Section 5.3, Major Facility Impacts; and,

b. Section 7.8, Overhead Electrical Safety Arrangements.

6.3.2 UNDERGROUND UTILITY FACILITIES

An in-depth study is to be made to determine utility conflicts using the project plans, profiles, cross sections, test hole data sheet, and other information provided with the plans. Project features such as the hydraulic design, retaining walls, guardrail, bridge piers, abutments, traffic signals, lighting, location of travel way or curb and gutter and other utility relocations proposed for the project in many instances create a conflict with existing utility facilities. Special attention and consideration should be given to the minimum vertical and horizontal separation requirements for utility facilities and the various features of the transportation project.

Notes are to be kept to indicate the name of the utility owner, type of material, visible appurtenances such as manholes, clean outs, fire hydrants, water meters, valve boxes, gas meters, pedestals, transformers, visible connections of power, telephone or cable television to poles and cost responsibility determination. It may be necessary to contact the appropriate utility owner to obtain the size of underground utilities from the utility owners' records. Any knowledge gained pertaining to underground utilities within the limits of a project should be noted on the plans.

The evaluation process will require the computation of elevation and grade for gravity sanitary sewer and marking depths of proposed cuts and fills on the plans for utilities to determine the location of utilities with reference to sub grade and other roadway features.

Additional references to underground utility involvement may be found in this manual in the following sections:

a. Section 7.9, Virginia Department of Transportation Policy on Placing Utility Facilities Underground.

b. Section 9.7, Scope of Services Regional Agreement.

c. Section 15.2, Guidelines for Relocation of Utilities from Traveled Area

6.4 COST RESPONSIBILITY DETERMINATION-UTILITY FIELD INSPECTION STAGE

The Regional Utilities Manager or designee has the responsibility to make the preliminary cost responsibility determination prior to the utility field inspection. The cost responsibility determination shall be made in accordance with the current statutes, rules, regulations, and resolutions as covered in Chapter 2 of this manual.

The utilities located within the proposed right of way, construction limits and project limits shall be listed on form UT-9 or in some acceptable format. It is preferable to use only the Form UT-9 for this purpose. However, on projects where the utility owner enjoys a statutory right that requires the project to bear the total non-betterment cost, a statement of responsibility, similar to the following, citing the section of the code will be acceptable.

> It has been determined that 100 percent of the non-betterment cost to relocate the existing facilities of (Utility Owner) found to be in conflict with project (Project Number) is to be borne by the project by virtue of Section (Section Number) of the Code of Virginia as amended.

This statement is to be included in UFI confirmation with a copy to the State Utilities and Property Manager by the Regional Utilities Manager or designee.

Form UT-9 is found in Appendix 4.

6.5 FEDERAL HIGHWAY ADMINISTRATION REQUIREMENTS

The Code of Federal Regulations (CFR) comprises the regulations promulgated by the administration and regulatory agencies of the national government. Title 23 of CFR, part 645 is comprised of Subpart A, "Utility Relocations, Adjustments and Reimbursement" and Subpart B, "Accommodation of Utilities" respectively.

Subpart A prescribes policies, procedures and reimbursement provisions for the adjustment and relocation of utility facilities on Federal-aid or direct Federal projects.

Subpart B prescribes policies and procedures for accommodating utility facilities and private lines on the right of way of Federal-aid or direct Federal transportation projects.

The Policies and Procedures established by VDOT generally follow the procedures presented in Title 23, part 645 of the CFR, Subparts A and B and are in compliance with the Federal Regulations.

Part 645 of CFR 23 Subparts A and B are included in Appendix 25.

Prior to initiating utility relocation a determination should be made if the project is Federal participating to assure that proper documentation and procedures are followed.

Approval is issued by the Federal Highway Administration (FHWA) on participating projects authorizing use of federal funds. A copy of the federal authorization is to be retained in the State Utilities and Property Manager's or the Regional Utilities Manager or designee's project file.

6.6 SEQUENCE OF CONSTRUCTION INVOLVEMENT/TIME FRAMES

Roadway construction and the relocation of utilities are so closely related that they should be thought of as one element especially when considering the safety of motorist, pedestrians, and construction workers during the development of plans for the transportation project and the utility relocation.

The transportation project plans, when necessary, will include a sequence of construction showing diagrams and appropriate notes to inform the project contractor as to how this operation is to be accomplished and advise of traffic problems that may be encountered. The sequence of construction should be one of the topics on the agenda at the utility field inspection, and should be discussed thoroughly during the concurrent engineering process.

Ideally, the relocation of utilities should be completed prior to award of transportation projects for construction. This will eliminate the need for a special provision or consideration for sequencing of the utility work.

Transportation projects, which do not require a sequence of construction for the project, may in fact require one to coordinate the utility relocation with project construction. In this case the utility owner must provide sufficient information for the preparation of the sequence of construction to be added as a part of the project plans.

6.7 PROJECT FUNDING

Generally, funds are allocated based on need to the various classifications of highways. The relocation costs for utilities are reimbursable where it is determined that the utility owner has compensable rights.

Cost responsibility determination is covered in Chapter 3.

6.7.1 FEDERAL FUNDED PROJECTS

When federal funds are participating in the right of way acquisition or utility relocation, the Director of Right of Way and Utilities will notify the Regional Utilities Manager or designee in writing.

All project files in the Regional Utilities Manager or designee's office must include proper documentation as shown in Section 13.7. When the utility relocation is federally participating the files must include a copy of the federal authorization. Upon receipt of authorization that federal funds will be participating in the relocation of utilities, the Regional Utilities Manager or designee shall update the RUMS accordingly.

6.7.2 URBAN FUNDED PROJECTS

On Urban Projects the town or city will participate in the cost of the project. The State/Federal share is 98% and the municipality share is 2%.

6.7.3 ACCESS PROJECTS FOR INDUSTRIAL, RECREATIONAL, AIRPORT, ETC.

Access funds shall not be used for the acquisition of rights of way or relocation of utilities. These funds are to be used for the actual construction and engineering of an access project.

These type projects are initiated by a town, city or county by the adoption of a resolution setting forth the responsibility to provide for the relocation of utilities. Utility owners may seek reimbursement from a town, city or county if they are entitled to be reimbursed.

AN EXCEPTION is made when an access road involves the reconstruction of an existing secondary road and secondary road funds are used to purchase the right of way and reimburse the non-betterment utility relocation cost. In this situation the non-betterment utility relocation may be project cost, subject to the normal cost responsibility determination.

6.7.4 PRIMARY TRANSPORTATION PROJECTS

Primary transportation projects include different classifications and may be funded from different sources, such as the arterial system, regular primary, and bonds.

The funding source needs to be determined and the applicable statutory rights applied for determining the appropriate cost responsibility. The statutory rights are covered in Chapter 2.

6.7.5 MULTIPLE TRANSPORTATION PROJECTS WITH MULTIPLE HIGHWAY SYSTEMS INVOLVED

When multiple projects occur in one set of plans to be constructed as one contract, each of the projects shall be treated separately and reported as such. The determination of cost responsibility may be different for each of the projects depending on the roadway classification. For example, when a project leaves a city and extends into a county, the urban project will be financed using urban funds with the town or city participating in the cost, however, the county portion of the project will have different funding depending on the classification of the road involved and the town or city will not participate in that segment.

6.7.6 TRANSPORTATION PROJECTS INVOLVING HIGHWAY SYSTEMS WITH DIFFERENT CLASSIFICATION

In some instances a transportation project funded under a specific highway system classification will involve a highway with a different highway system classification.

The prevailing laws applicable to a specific project, which is funded and authorized, will be used to make the cost responsibility determination for the relocation of utility facilities regardless of the involvement with highway systems of different classification.

An example of this would occur when a primary funded project crosses a secondary highway and utility facilities within the secondary highway require relocation as a result of the primary project. In this example the applicable laws for the primary funded project would be

used to make the cost responsibility determination for utility facilities involved within the secondary highway since no separate secondary project number was used.

6.8 PROJECT TARGET DATES

Target dates are established in Integrated Project Manager (iPM) for initiating and completing the various phases of a project. This includes the utility field inspection, public hearing, approved right of way, completion of right of way and easement acquisition, utility plan and estimate approved, project advertisement. These target dates are to be furnished to the participants at the utility field inspection. The utility owner will be expected to use the dates furnished by VDOT to establish internal deadline dates within their organization for submission of easement plans, easement instruments, plan and cost estimate, or relocation plans for work to be included within the transportation project contract.

6.8.1 PROCEDURES FOR ESTABLISHING IPM ACTIVITY 67U

This activity code is to be used on all projects because it is required that a time frame be established between end of right of way acquisition and the advertisement of the project. This time frame will allow for the construction of utility relocation.

The Regional Utilities Manager or designee is responsible for establishing the duration of activity 67U, which will require the use of this field in iPM, and for establishing the dates to be entered. The begin date should be two weeks after the end of activity 69 when all the right of way has been acquired. It is desirable for the end date to

show completion of the utility relocation five weeks before advertisement of the transportation project. If not, it should be completed one week prior to the award of the transportation contract.

Activity 67U involves the construction of utility relocation by the utility owners and is not to be used for utility work performed by the VDOT contractor.

6.9 SCHEDULING UTILITY FIELD INSPECTION

The Regional Utilities Manager or designee is responsible for scheduling the utility field inspection (UFI). The utility field inspection should be scheduled within four weeks after receipt of the project plans.

The Regional Utilities Manager or designee will submit project plans and project electronic files to each utility owner affected. The appropriate letter, contained in the RUMS will be used for transmitting plans and scheduling the utility field inspection.

The project plans or project electronic files are to be used by the utility owner to show replacement easements and return them to the Regional Utilities Manager or designee. The project plans or project electronic files are to be used by the utility owner in connection with the planning and utility design for the relocation of utilities to accommodate the project construction.

On projects where both aerial and underground utilities are involved, it may be appropriate to schedule separate utility field inspections. Where separate utility field inspections are held, it is important that each utility

owner coordinate with the Regional Utilities Manager or designee as well as with other utility owners involved to avoid conflicts with the overall relocation planning associated with the project.

6.10 AUTOMATED LAND USE PERMIT SYSTEM (LUPS)

An automated Land Use Permit System (LUPS) is now being used to issue Land Use Permits. LUPS is a stand-alone system utilizing personnel computers, and is very beneficial in tracking essential permit data.

LUPS can be a source for determining if permits have been issued for utility installations within a given project.

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CHAPTER 7

THE UTILITY FIELD INSPECTION

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CHAPTER 7

THE UTILITY FIELD INSPECTION

7.1 GENERAL

The utility field inspections will be presided over by the Regional Utilities Manager or designee.

Representatives from Location & Design Division (L&D), Project Management Office (PMO), Structures and Bridge and Right of Way and Utilities Divisions and others as deemed necessary should be invited to attend the utility field inspection when their contribution is needed to coordinate planning for the relocation of utility facilities. The Location and Design Division's project designer may request that a representative from their office attend the utility field inspection. This request will be included in the plan distribution memorandum LD-428.

Sufficient information and details shall be furnished to the participants so each will have a good understanding of the scope of the project.

A status report may be kept for each individual project by the Regional Utilities Manager or designee for the purpose of monitoring and tracking the different elements involved in the utility relocation process. RUMS may be utilized for this purpose.

7.2 PROJECT SPECIFICS AND SCHEDULE

The Regional Utilities Manager or designee will provide a schedule for the remaining phases of the transportation project to each utility owner, their consultants and others involved in the utility field inspection.

Target dates will be established by the Regional Utilities Manager or designee for the utility owners to submit easement request, plan and estimate, and easement instruments.

Specifics of the project can be better explained and understood when certain components of the project plans and the appropriate plan sheets are reviewed and discussed. The plan sheets listed below contain information important to the utility relocation process and should be made a part of the review and discussion during the utility field inspection.

7.2.1 TITLE SHEET

Discussion of information on this sheet should include the following:

a. The project termini or “from” and “to” description;

b. Length of project;

c. Project number, including the proper section number to use such as “RW-201”;

d. UPC number; and,

e. Other information on this sheet that may be applicable to the given project.

7.2.2 RIGHT OF WAY DATA SHEET

The right of way data sheet includes names of the landowners and parcel numbers. This information will be referenced on easement requests and easement agreements prepared by the utility owner.

Typically, the utility owner will "pencil" the landowner names onto the utility easement form which will allow the negotiator to revise, if necessary, to reflect the correct name of the landowner.

7.2.3 TYPICAL SECTION SHEET

This sheet provides typical sections for the main route, connections, bikeways, ramps, frontage roads, etc., which are to be brought to the attention of all utility field inspection participants. Typical sections are an important consideration for the utility relocation planning and design, especially where underground facilities are anticipated within the project.

7.2.4 UNDERGROUND UTILITIES TEST HOLE INFORMATION SHEET

The test hole information sheet should provide specific information on the location of underground utilities, which is used to make an evaluation and determination of utility conflicts with the transportation project.

7.2.5 DETAIL SHEETS, PLAN NOTES AND PROFILES

The detail sheets and plan notes provide information regarding the transportation project that may affect the existing utilities such as waste areas for surplus or unsuitable material and plan and profile for undercut areas.

7.2.6 TRANSPORTATION MANAGEMENT PLANS, SEQUENCE OF CONSTRUCTION, TEMPORARY DETOURS AND ASSOCIATED STRUCTURES

The details for the above shall be provided to insure all areas are clear of potential utility conflicts caused by detours or other activities that must be staged.

7.3 REVIEW EACH UTILITY OWNER'S CONFLICT AND INVOLVEMENT

Each utility facility and attachment within project limits, including temporary construction and other permanent easements should be discussed. As a minimum, the following subsections should be taken into consideration when reviewing the project with utility owners.

7.3.1 OWNERSHIP OF POLES

Where more than one utility owner occupies a pole jointly, the ownership of the pole should be determined. Typically, poles are tagged with an identification number and the owner's name. In cases where ownership of the pole is not evident, the utility owner should provide the required information.

7.3.2 CONFLICT DETERMINATION

A determination will be made prior to or during the utility field inspection to identify aerial and underground facilities within project limits that are a potential conflict and could require relocation versus those facilities that may not be in conflict and may possibly be allowed to remain if their location is in compliance with the current accommodation policy and clear zone requirements.

Chapter 15, Section 15.2, includes “Guidelines for Relocation of Utilities from Traveled Areas”. Chapter 6 and Chapter 9 also provide guidance for determining utility conflicts.

The clear zone requirements may be shown on the typical section sheet. VDOT's clear zone guidelines are included in Appendix 31.

Utility facilities are considered to be in conflict with the project when their location with respect to the proposed project are not in compliance with the Land Use Permit Regulations (24 VAC 30-151) or the clear zone requirements.

Utility facilities are also considered to be in conflict when certain situations are encountered, such as the following:

a. Direct conflict with project construction;

b. Utility facilities are located within Limited Access right of way;

c. Insufficient vertical clearance of utility facilities crossing the proposed project or roadway features where construction will be performed;

d. Insufficient horizontal clearance with roadway features such as bridge structures, sound walls or where special construction equipment is required to construct the project;

e. Utility facilities are located in an area that will not allow access for maintenance;

f. When an anchor guy or stub pole extends from a pole into construction limits and there are no alternatives except relocate the pole from which they extend; or,

g. Where proposed construction will endanger the utility facilities.

7.3.3 COST RESPONSIBILITY DETERMINATION

The cost responsibility must be determined for all existing utility facilities located within the limits of the proposed project, including road or street connections and construction easements, and shown on form UT-9 regardless of their conflict status.

Cost responsibility shall be made in accordance with the current laws, rules and regulations as covered in Chapter 2 and the procedures found in Chapter 3 of this manual.

7.3.4 REAL PROPERTY INTEREST

When utility facilities are located on private property, the utility owner should be prepared to discuss compensable interests and/or rights in the land on which their facilities are located. The utility owner must furnish the real property interest documentation to VDOT no later than the submission of the plan and estimate.

See Sections 2.4 and 2.5 for documents required to support real property interest.

7.3.5 PRIOR RIGHTS

When utility facilities are located within the existing public right of way, the proof of prior rights is the burden of the utility owner. The utility

owner must furnish proof of prior rights in the form of an agreement or other written documentation.

During the utility field inspection, the utility owners should be prepared to furnish copies of agreements to support their claim for prior rights.

When prior rights issues cannot be resolved during the utility field inspection, the utility owner must furnish written evidence of prior rights to the Regional Utilities Manager or designee following the utility field inspection.

The Regional Utilities Manager or designee must examine the prior rights documentation, and be satisfied that the information is adequate to support the claim. If the Regional Utilities Manager or designee is unable to make a determination, the State Utilities and Property Manager should be furnished all information available and requested to make a determination. The determination may require the State Utilities and Property Manager to request legal advice from the Attorney General's office.

Support for prior rights is entirely the responsibility of the utility owner. Section 2.6 provides further information on prior rights.

7.3.6 PROPOSED METHOD OF ADJUSTMENT

The method for each utility relocation, including a tentative route or location, should be discussed and determined. This information can be used to determine the impact to the adjacent property owners, utility

easement needs, estimated cost to adjust utilities, and further coordination required with the project and other utility owners.

7.3.7 COORDINATION AND SEQUENCE OF UTILITY RELOCATION BY UTILITY OWNER

The utility owners should coordinate the utility design and the schedule for utility relocations with the established project construction sequence. If the utility owner is unable to coordinate the utility relocation with the construction sequence outlined, they should provide VDOT with sufficient information including the proposed relocation plans and the time frame in which relocation will occur so the sequence of construction can be reconsidered by VDOT.

7.3.8 UTILITY RELOCATION PLANS FOR WORK AT 100% UTILITY COST

The utility owner should develop a plan of relocation by coordinating with other utility owners and the transportation project plans in accordance with Chapter 8 of this Manual. The requested number of sets of the relocation plans must be submitted to VDOT in accordance with due dates established by the Regional Utilities Manager or designee and prior to proceeding with the relocation work. These plans will be used to determine if there are conflicts with the project or other utility relocations. When required, they will be used to prepare special provisions and the suggested sequence of utility relocation with project construction.

7.4 UTILITY EASEMENT REQUIREMENTS

When the utility relocation requires the acquisition of new or replacement utility easements, the utility owner may acquire its own easement or rights if there are no project schedule impacts.

When the utility owner acquires easements, it is not necessary to show the easement on the project plans unless the installation of the utility is to be performed by the transportation project contractor. In this case, the utility easement should always be shown on the project plans.

When utility owners acquire the replacement easements, the acquisition shall be done in accordance with established procedures of the utility company. The cost to acquire such easements may be included in the relocation cost estimate.

If the utility owner is unable to obtain their own easements or prefers that VDOT acquire the utility easements, VDOT may do so during the right of way acquisition phase of the project. In this case, the utility easements must be shown on the project plans.

When practical, the utility owners should give consideration to occupying VDOT right of way with relocated utilities, provided sufficient right of way is available and facilities can be installed in compliance with the requirements of the Land Use Permit Regulations. In instances where an easement is necessary for construction of the transportation project and the utility owner does not have an existing recorded utility easement in their name, VDOT will acquire a VDOT Joint Use Utility easement and permit the utility into the easement area. Preliminary utility easements or a note referring to the future

need for utility easements must be shown on public hearing plans of an urban project or a project located in an urbanized area prior to the willingness and public hearing stage. The preliminary utility easements are for the purpose of addressing the concerns of the affected landowners. Preliminary utility easements are covered in Section 5.4.

7.4.1 EASEMENT PLANS AND REQUEST BY UTILITY OWNER

A set of project plans/electronic project files showing easements marked in red including the type (such as standard, trimming, guying, overhang or a combination of trimming, guying or overhang and other types appropriate for a particular utility facility or appurtenance) of easement involving each landowner must be submitted to the Regional Utilities Manager or designee by the utility owner.

When temporary utility easements are necessary they should be noted on the plans as such and the easement agreement prepared accordingly.

The plans and a written request must be submitted within a reasonable time as agreed during the utility field inspection.

Locations for replacement easements should be carefully considered. The relocation should be designed to minimize encroachment on adjacent properties.

When possible, joint use facilities should be designed and joint use easements obtained in order to minimize easement requirements.

Where buildings or other structures are adjacent to the proposed utility facility, and the normal easement width for the facility involved would include buildings or structures, consideration should be given to modify the easement to exclude encroachment on buildings or structures from the easement plan and request.

The following information must be included with the written request or shown on the plans:

a. Location or alignment of existing facilities;

b. The type of existing utility facility;

c. The location of existing easements should be defined and shown on the plans. If the width of an existing easement is undefined, it should be stated in the utility owner's request;

d. Location or alignment of proposed facilities including the location of proposed replacement easements or requested shared easement. Easement areas should be marked and clearly defined on the project plans;

e. The type of proposed facility to be constructed in the new easement must be noted;

f. If the easement is for a joint use facility, it must be noted;

g. Width of new easement must be shown when practical. If the new easement is uniform in width, it should be noted as such. If

the easement is not uniform in width, it should be noted as a "variable width easement"; and,

h. The type easement proposed such as standard, trimming, guying, overhang or a combination of trimming, guying or overhang and other types appropriate for a particular utility facility or appurtenance must be provided.

The written requests must contain a statement similar to the following:

> The (Utility Owner Name) requests the Virginia Department of Transportation to act as our agent in acquiring the utility easements shown on the plans for the project, and agrees to bear its share (if any) of all applicable costs.

The Regional Utilities Manager or designee must prepare a composite set of plans or digital files within MicroStation showing all the utility easements required on the project and submit these to the Location and Design Division or Project Management Office to be included in the approved right of way plans. A timeframe between the UFI and the date that the above utility easement plans or digital files are submitted to Location and Design will be determined on the Scoping Report and/or by written notification from the Regional Utility Manager or designee to the L&D Project Manager. The plans shall designate which easements are to be acquired in the name of the utility owner (replacement easement) and which will be VDOT Utility Easements. After the utility easements are included in the project plans, a copy must be sent to each utility owner using the appropriate RUMS letter requesting the utility owner to submit

easement instruments, for any easement eligible to be in the owner's name, if they have not done so. The utility owner is to be encouraged to utilize VDOT plan sheets as a reference drawing instead of preparing a separate plat.

See Appendix 7 showing an example letter of the utility owners request for VDOT to obtain utility easements.

Example wording for different utility easement types to be shown on VDOT plans are shown in Appendix 11.

An example plan showing utility easements is shown in Appendix 11.

The Regional Utilities Manager or designee should use RUMS for tracking the status of easement acquisitions, both replacement and VDOT joint use.

7.4.2 EASEMENT COST RESPONSIBILITY

VDOT is required to offer the landowner the fair market value for right of way or easements to be acquired. Generally in rural areas a nominal value is placed on the cost of the utility easement. In metropolitan areas a percentage of the fee value is applied and this can be costly.

Except for replacement of an existing recorded easement, VDOT will exercise the right to seek reimbursement from the utility owner when each utility owner's portion of the cost exceeds $500 per parcel. If the utility owner is requested to participate in the cost of the utility easement, the utility owner must be notified of its share of

cost prior to VDOT negotiating for this easement. In most cases, this cost will be based entirely on the appraised value of the new easement.

The utility owner is responsible for its share (if any) of all applicable costs for acquiring the new easement. The costs may include, but is not limited to appraisal and attorney fees, court costs, costs for filing certificates and recording deeds, consideration paid for land, improvements, damages, condemnation awards, etc.

Each Regional Utilities Manager or designee must develop procedures within the Regional Right of Way Office, whereby the appraisal section will provide the appraised value applied to the utility easements. When each utility owner's portion of the appraised value exceeds $500 on any parcel, the Regional Utilities Manager or designee must notify the State Utilities and Property Manager to ascertain a course of action to be taken.

7.4.3 UTILITY EASEMENT INSTRUMENTS/AGREEMENTS

Prior to the right of way approval date of the project plans, the utility owner must submit four (1-original & 3-copies) completed utility easement forms to the Regional Utilities Manager or designee for easements eligible to be in the utility owner's name. An easement instrument must be fully prepared for each parcel.

The names of property owners are to be filled in by the utility owner using erasable pencil. The legal current owner's name will be filled in permanently during negotiations with the landowner.

VDOT parcel numbers should be shown in pencil at the top of the form to allow for easy tracking.

The Regional Utilities Manager or designee shall verify that all required easement agreements are received as well as ensure that the utility owner has properly prepared each. The Regional Utilities Manager or designee shall then forward the easement agreements to the Regional Right of Way Manager for negotiation.

7.4.4 REMOVAL OF BUILDINGS REQUIRED TO ACCOMMODATE UTILITY RELOCATION

The relocation should be designed to avoid existing buildings within the proposed right of way when possible. When the utility relocation cannot avoid conflict with an existing building, the Regional Utilities Manager or designee must notify the Regional Right of Way Manager and request that priority be given to the acquisition and demolition of the building or other improvements.

7.4.5 PRIORITY REQUEST FOR UTILITY EASEMENTS ACQUISITION

The Regional Utilities Manager or designee should prepare a list of parcels on which utility easements are required and request the Regional Right of Way Manager to give priority to negotiating these parcels to ensure that the utility owner has a signed easement or right of entry to allow the utility relocation to proceed on schedule.

7.4.6 UTILITY EASEMENT CHECK LIST

During negotiations, the utility easements are acquired along with the right of way required for the transportation project. When a land owner refuses to convey a utility easement, and it becomes necessary to initiate eminent domain proceedings against the land owner, the Regional Right of Way Manager will request the Regional Utilities Manager or designee to complete the utility easement check list.

It is important that the utility easements shown on the marked plan sheets be verified using the approved project plans to assure they are correctly shown and marked. Different colors are to be used for separate easements for each utility owner. See Section 5.2.2-G, Table 5-2 of the Right of Way Manual for color- coding. The utility owners plat may be used in lieu of showing the owner's easement on the VDOT plat. Any VDOT Joint Use Utility Easement will be shown on VDOT's plat.

Utility Easement Check List is shown in Appendix 8.

7.4.7 UTILITY EASEMENT PROCEDURES - DISTRICT OFFICE

The Regional Right of Way Manager shall include the utility easement requirements into the appraisal and negotiation process. The right of way negotiation report (RW-24) will include the results of the negotiations as they affect utility easements, which may be one of the following alternatives:

a. If a voluntary agreement is obtained from the landowner for the right of way, the option may provide that the landowner agrees to convey the utility easement directly to the utility owner. The utility owner should immediately follow up with their easement agreement after notification by VDOT that the option has been accepted and the landowner has agreed to grant the required easement. On those projects where the utility owner has requested VDOT to act as their agent and have furnished the proper easement agreements, the negotiator will have the landowner execute the utility owner's easement agreement along with the signing of the option for right of way.

b. If the landowner refuses to convey an easement to the utility owner or VDOT, the utility easement will be acquired by eminent domain. In this case, the utility easement would be obtained in the name of the Commonwealth. For replacement easements, they will be taken subject to the reconveyance to the utility owner at a later date. The Regional Right of Way Manager will request the Regional Utilities Manager or designee to review the assembly and complete the Utility Easement Check List, which will be sent to the Director of Right of Way and Utilities with other

negotiation reports. The Regional Utilities Manager or designee shall inform the Regional Right of Way Manager of instances where this will be applicable. This is also to be denoted in RUMS.

c. Option to convey utility easement direct - In some cases, negotiations for right of way will provide for the landowner to convey a utility easement directly to the utility owner. The utility owner must present an easement instrument to the landowner at which time the easement acquisition will be consummated.

The acceptance letter to the landowner for the right of way will confirm this arrangement. The utility owner will be sent a copy of the acceptance letter to include a postscript notifying the utility owner that the landowner agrees to convey direct upon presentation of the easement instrument. A copy of the letter should be sent to the Regional Utilities Manager or designee.

7.4.8 UTILITY EASEMENT PROCEDURES - CENTRAL OFFICE

Eminent Domain - A copy of the letter to the Clerk of the Court by the Director of Right of Way and Utilities shall be sent to the utility owner, notifying the utility owner that right of entry will be available upon recordation of the Certificate. A copy of the Certificate and the marked plans will be attached to the utility owner's copy of the letter. It should be understood by the utility owner that indefeasible title to

the land, including the utility easement, will pass to VDOT upon completion of the condemnation proceedings and reconveyance to the utility owner will usually be made at a later date.

The Right of Way Manual should be referred to for additional information pertaining to the procedures regarding utility easements.

7.5 EMPLOYMENT OF CONSULTANT BY UTILITY OWNER

Where a privately, publicly or cooperatively owned utility company normally uses the "Plan and Estimate" (Force Account) method to obtain reimbursement, certain procedures must be followed in order for the cost of engineering services to be eligible for reimbursement.

Where the utility owner does not fall under the requirements of the Public Procurement Act, selection of consultants is to be in accordance with company policy and procedures.

The use of consultants selected under this arrangement is subject to the approval of the State Utilities and Property Manager.

The utility owner must submit a request to use consultants to perform engineering services to the State Utilities and Property Manager and obtain approval prior to proceeding with the work. The request must contain the following information:

a. A statement as to the utility owner's need to use such services, such as, inadequately staffed to perform the necessary engineering and related work for the utility relocation on transportation projects.

b. The utility owner and consultant have agreed in writing as to the services to be provided and the fees and arrangements for the services.

c. Services are being performed under an existing written continuing contract. This is accepted when it is demonstrated that such work is performed regularly for the utility owner in its own work and that the costs are reasonable.

d. The cost for engineering services will not be based on a percentage of the cost of relocation.

e. The method used by the utility owner to select the firm, if not a continuing contract. If more than one consultant is to be used a separate request must be submitted by the utility owner and approval obtained from the State Utilities and Property Manager.

After general approval is given to the utility owner by the State Utilities and Property Manager to use a consultant to perform engineering services in connection with the relocation of utilities for transportation projects, a specific request is required for each transportation project. The specific request must be submitted to the Regional Utilities Manager or designee and subsequent approval obtained prior to proceeding. The request to use consultants for engineering services on a specific transportation project must include the following information:

a. The name of the consultant and the arrangement under which they will be used.

b. Services to be provided for the specific transportation project.

c. The fee for providing engineering services for the specific transportation project.

d. A statement that the fee approved will be included in the relocation estimate and that the prorate established for the relocation work will be applied to this fee.

An example letter for use by the utility owner to request the use of consultants for relocation to be performed under a plan and estimate is shown in Appendix 6.

Fees for engineering services less than $10,000 may be authorized by the Regional Utilities Manager or designee when it is determined that the fees are reasonable and commensurate with the amount of work required. Fees for engineering services greater than $10,000 must be sent to the State Utilities and Property Manager for approval.

The engineering fees are to be identified and included in the utility owner's estimate and subsequent billing. The prorate established for the project is to be applied to the total estimated and final cost, including the engineering fees. The engineering fees are not to be billed separately, unless a separate plan and estimate has been approved and authorized by the Regional Utilities Manager or designee.

Requirements for use of VDOT's regional consultant to design the relocation for utility facilities are contained in Chapter 9.

7.6 BRIDGE ATTACHMENTS

Due to current bridge design standards involving full and semi-integral bridge abutments any and all utility bridge attachments are highly discouraged. Utilities may be attached to bridge structures only when it is not feasible or economically reasonable to locate them elsewhere. All alternate locations for the installation of utilities shall be considered by the utility owner prior to submitting a request to attach to a bridge structure. The design for bridge attachments must be in accordance with the VDOT Bridge Attachment Standards.

Utilities shall not be placed on the exterior of bridge structures except when there is no other alternative and then only with the approval of the State Structure and Bridge Engineer.

Isolation valves should be located in close proximity to each end of a bridge when pressurized lines are attached. If existing values are not in place, new isolation values should be provided outside of each end of a bridge.

VDOT has on file bridge attachment plans for water lines, gas lines and conduit systems which have been approved by the State Structure and Bridge Engineer, and are recommended for use by the utility owners.

If the VDOT Bridge Attachment Standards do not meet the utility owner's requirements or needs, the utility owner shall design an attachment to be

reviewed and approved by the State Structure and Bridge Engineer. Final design plans for utility attachments to bridges shall be on reproducible plan sheets.

The VDOT project contractor shall provide all materials and labor associated with the construction of the bridge attachment unless otherwise agreed upon.

The utility owner shall request the bridge attachment as soon as possible and no later than two weeks after the utility field inspection. The request must be by letter to the Regional Utilities Manager or designee. The bridge attachment request must include the following information:

a. Assigned structure project number and/or accurate description of the structure and its location;

b. Preferred location on the structure for the utility attachment;

c. Size of pipe, type material, number of conduits, etc.

d. Type of utility to be attached to the bridge;

e. Documentation of other alternatives considered not to be feasible; and,

f. Cost responsibility.

If the utility owner is responsible for all or any portion of the attachment, either because of “cost responsibility” or “betterment”, the written request shall include a statement similar to the following:

> (Name of Utility Owner) agrees to bear (percentage) or (its share) of the cost of attachment based on the applicable unit prices in the contract awarded by the State, plus the applicable project VDOT construction and administrative costs.

When the bridge attachment is to be constructed in conjunction with other utility work included in the VDOT project contract, one utility agreement will cover both the bridge attachment and the utility work. Section 10.6 covers utility agreements used for in plan utility work.

When a bridge attachment provides for a utility facility that is being relocated by the utility owner or its contractor either under a plan and estimate or at 100 percent utility owner's cost, an agreement providing for the bridge attachment is necessary. An example agreement providing for a bridge attachment is shown in Appendix 29, and may be modified to provide for the given cost responsibility. Other bridge attachment agreements can be found in RUMS. The Regional Utilities Manager or designee shall prepare the bridge attachment agreement. The utility owner and the Director of Right of Way and Utilities must execute the agreement.

The Regional Utilities Manager or designee must send copies of acceptable bridge attachment request from the utility owner and a copy of the executed agreement to the State Utilities and Property Manager, Fiscal Division and State Structure and Bridge Division and shall request the Fiscal Division to establish an account receivable for this work in order to obtain reimbursement from the utility owner. The cost responsibility (pro- rate) must be included in Transport in order for Fiscal to bill the respective utility company for its share of the cost for the attachment.

7.6.1 COMMUNICATION AND ELECTRIC POWER LINES

Communication and electric power lines may be attached to bridge structures. They shall be insulated, grounded and carried in a conduit.

7.6.2 WATER AND SANITARY SEWER LINES

Water and sanitary sewer lines may be attached to bridge structures and shall be constructed of ductile iron or steel pipe in accordance with the applicable sections of the VDOT Road and Bridge Specifications and VDOT attachment standards. Encasement is not required in most cases but insulation may be used, depending on location. Manholes, valves or vent boxes shall not be allowed on bridges.

7.6.3 DISTRIBUTION NATURAL GAS MAINS

Distribution natural gas mains may be attached to bridge structures. A distribution natural gas main attachment to a bridge crossing a roadway or navigable waterway is not desirable and will be approved only if there are no reasonable alternatives. A distribution natural gas main shall be considered as one that transmits natural gas from distribution centers to other distribution pipelines or service connections. It is the utility owner's responsibility to furnish evidence that the gas main meets these requirements.

7.6.4 TRANSMISSION NATURAL GAS MAINS

Transmission natural gas mains, as well as pipelines that transmit petroleum products, shall not be attached to bridge structures. A transmission natural gas main is considered as one that transmits

natural gas, usually under high pressure for a long distance, from the source of supply to distribution centers or other terminal points.

7.6.5 SPACE FOR FUTURE INSTALLATIONS

VDOT will not provide space on a bridge structure for the future attachment of a utility unless the utility can be installed at a later date without disrupting traffic or the bridge approaches and roadway pavement. Preferably, the utility shall be installed on the bridge, under the approaches, and terminated in the shoulder area on each side of the new structure, during initial construction to eliminate any future disruption of the roadway and interference to traffic. If this is not feasible, a sleeve or casing shall be installed under the approaches and plugged in the shoulder at the time the bridge is constructed.

7.7 ENVIRONMENTAL CONSIDERATIONS AND PERMITS

The Regional Utilities Manager or designee shall request assistance from the District Environmental Program Manager to resolve utility relocations involving environmental issues.

The Regional Utilities Manager or designee shall notify the Utilities that any out of plan work may require environmental permits.

7.7.1 REQUIREMENT FOR PERMITS AND/OR CERTIFICATES

Permits and/or certificates required by the following authority:

a. Section 404 of the Federal Water Pollution Control Act Amendments of 1972 - This involves the discharge of

dredged or fill material in navigable waters. Issued by the U. S. Army Corps of Engineers.

b. Subaqueous Bed Permit - Issued by the State Marine Resources Commission.

c. Water Quality Certificate - Issued by the State Water Pollution Control Board, Department of Environmental Quality. Section 401 of the Federal Water Pollution Control Act Amendment of 1972 requires any applicant of a Federal permit who will conduct any activity, which may result in a discharge into navigable waters to obtain such certificate.

d. Sections 9 and 10 of the River and Harbor Act of March 3, 1899, prohibit the unauthorized obstructions or alteration of any navigable water in the U.S. The construction of any structure in or over any navigable water of U.S., the excavation from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, conditions or capacity of such waters, requires the recommendation of the Chief of Corps of Engineers and authorization of the Secretary of the Army. This “Navigational” permit is issued by the U. S. Coast Guard, if a bridge is involved, or by the Corps of Engineers if the encroachment on navigable

waters does not involve a bridge. A Water Quality Permit is also required for a Section 10 Permit.

e. TVA Permit - Required by the Tennessee Valley Authority for construction of a bridge or other large structures over streams that are tributaries of the Tennessee River.

The Central Office, Environmental Quality Division, through the District Environmental Program Manager will determine the need for and the type of permits required. The project designer is responsible for preparing the necessary information to accompany the permits. The project designer will outline or identify the permit areas on the project plans and request the Central Office Utilities Section or the Regional Utilities Manager or designee to provide information on utility adjustments through these areas. If the Central Office Utilities Section is notified, they shall follow up this request through the Regional Utilities Manager or designee who will notify the utility owners accordingly.

The necessary environmental permits must be obtained by either the utility owner or VDOT depending on the circumstances involved in the relocation or installation of utilities in conjunction with a transportation project. The criteria in section 7.7.2 must be used to determine if the utility owner or VDOT is to obtain the permit.

7.7.2 RESPONSIBLE PARTY FOR OBTAINING ENVIRONMENTAL PERMITS

a. VDOT will obtain the environmental permits for in plan work when the following circumstances are involved:

(1) The utility relocation is a result of the transportation project and funded by VDOT/ and/or the utility facility owner(s).

(2) The proposed utility facilities are within the right of way or easement acquired by VDOT; or

(3) The utility relocation or installation have been incorporated into VDOT's project contract to be performed by the project contractor and inspected by VDOT inspectors who have authority to enforce permit and VDOT contract provisions.

b. The utility owner will be required to obtain the environmental permits for work that will be performed by the utility owner(s) when the following circumstances are involved:

(1) The utility relocation or installation will not be <u>constructed as a part of the transportation project contract</u>;

(2) The utility relocation <u>is performed by the utility owner without cost to the transportation project and outside of</u>

the project right of way. The utility owner will obtain the permit and perform the work;

When VDOT is required to obtain the environmental permit for utility relocation involving environmental sensitive areas and utility work is to be incorporated into the transportation project plans, a plan, profile and appropriate description of the utility relocation will be required from the utility owner or the regional consultant.

In addition, a step-by-step description of how the work will be performed in navigable waters and wetlands must also be prepared and submitted by the utility owner. If environmental sensitive areas will not be affected by the utility relocation, a statement to this effect from the utility owner will suffice.

The utility owner should furnish this information to the Regional Utilities Manager or designee within thirty days after VDOT's request, so that it can be incorporated into VDOT's permit application.

In these cases, the utility owner shall have environmental permit approved two months prior to the project advertisement date or risk having the utility work removed from the contract.

7.8 OVERHEAD ELECTRICAL SAFETY ARRANGEMENTS

Overhead utility lines in close proximity to the transportation project work area must be reviewed with reference to their location both vertically and horizontally to construction and construction requirements for grade, bridge structures, and other project features. The constructability and safety

aspects must be taken into consideration to assure that plans are developed to provide relocation of utility facilities that will allow construction to be performed in a safe manner. When a determination regarding the effect of overhead electric facilities due to the lack of sufficient information cannot be made during the utility field inspection the Regional Utilities Manager or designee must request the Location & Design Division to perform an additional survey for the area involved. When overhead utility lines are involved with bridge structures the Regional Utilities Manager or designee must confer with the District Structures and Bridge Engineer to assure that plans for adequate relocation of utilities is being provided to allow the bridge structure to be constructed safely.

The cost responsibility to perform the relocation of overhead utility lines shall be determined in accordance with Chapter 3.

Whenever it is determined that relocation or adjustments are being made for the sole convenience of the project contractor, the cost shall be the responsibility of the contractor.

The Overhead High Voltage Line Safety Act, section 59.1-406 through 59.1-414 of the Code of Virginia as amended, should be referred to as a guideline for determining the requirements to provide relocation for overhead utility lines. See Chapter 2.9.2 f. for further reference to The Overhead High Voltage Line Safety Act.

7.9 VIRGINIA DEPARTMENT OF TRANSPORTATION POLICY ON PLACING UTILITY FACILITIES UNDERGROUND

The Commonwealth Transportation Board (CTB) adopted a policy, which gives municipalities the option to have overhead utility facilities relocated underground on urban projects. This policy is applicable to projects proposed for construction in accordance with Section 33.2-348 of the Code of Virginia and to projects in Arlington County.

Under this policy the applicable locality can request VDOT to use part of the project funding to help pay for relocating overhead utility facilities underground. Up to fifty percent of the additional cost, not to exceed $5,000,000 per project, can be paid out of the project funding for this purpose. Currently for the following cities: Chesapeake, Hampton, Newport News, Norfolk and Richmond, these costs are covered at 100%, not to exceed $5,000,000 per project.

This policy is included in Chapter 15.

7.9.1 FORMULA

The following formulas are used for computing VDOT and locality estimated cost to construct utility facilities underground.

1. <u>Part A Cost</u>

   THEORETICAL REPLACEMENT FACILITY COST - the utility owner develops theoretical non-betterment replacement facility cost, including engineering. When VDOT is responsible for a portion of the relocation, the appropriate cost responsibility methods found in Chapter 3 are to be used.

The theoretical facility would generally be the relocation of the overhead facility to a new location. The utility owner and Regional Utilities Manager or designee must agree upon the theoretical plan. The theoretical replacement cost is reimbursed in accordance with funding requirements as follows:

a x b x 98% = VDOT's Share

a x b x 2% = Locality's Share

a x c = Utility Owner's Share

a = Estimated cost to replace in kind

b = Project's prorate percentage

c = Utility Owner's prorate percentage

2. Part B Cost is the additional estimated cost to place the utility facility underground. This cost is the mathematical difference between the proposed estimated non-betterment underground relocation cost and the theoretical replacement facility cost.

The Total Estimated Cost and the Additional Estimated Cost to relocate utility facilities underground is determined by the utility owner and is computed as follows:

d - a = Additional estimated cost to relocate underground.

d = Total Estimated cost (non-betterment) to construct an underground facility.

a = Theoretical Replacement Facility Cost (in-kind).

3. Computing each party's additional estimated cost to relocate aerial to underground is as follows:

VDOT's share = (d-a) x 50% = Project Cost x 98%

Locality's Share = (d-a) x 50% + Project Cost x 2%

Utility Owner's Share = None

4. VDOT'S AND LOCALITY'S SHARE of the reimbursement cost is the sum of parts A and B. Once the part A and part B cost are determined they shall be included in the appropriate tri-party agreement (Appendix 30). Separate billings for Part A and Part B cost shall be submitted by the utility owner.

VDOT's policy does not permit the Part B VDOT cost, for all the utility owners involved in this arrangement, to exceed $5,000,000 per project.

7.9.2 EXAMPLE

The following is an example for computing VDOT and locality estimated cost to underground utilities.

1. PART A COST is the theoretical replacement facility cost developed by the utility owner and accepted by VDOT.

For the purpose of this example the theoretical replacement non- betterment facility construction cost is $300,000 and the prorate is 35% project cost.

Project cost is $300,000 x 35%	=	$105,000
Utility owner cost is $300,000 x 65%	=	$195,000

Funding Requirements

$105,000 x 98% = $102,900 (VDOT's Share)
$105,000 x 2% = $2,100 (Locality's Share)
$195,000 (Utility Owner's Share)

2. PART B COST - The additional estimated cost to place the utility facility underground is the mathematical difference between the proposed estimated non-betterment underground relocation cost and the theoretical replacement facility cost.

3. Computing each party's additional estimated cost.

For the purpose of this example the estimated (non-betterment) construction cost for placing the facility underground is $10,000,000.

The additional estimated project cost to relocate aerial to underground is computed as follows:

$10,000,000 - $300,000 = $9,700,000

VDOT's participation in the additional cost to place utility facilities underground shall not exceed $5,000,000. All costs exceeding $5,000,000 are non-allowable and shall be borne by

the locality; therefore, the amount exceeding $5,000,000 will become the responsibility of the locality.

Cost to VDOT (98% of project cost, Not to Exceed $5,000,000)

$9,700,000 x 50% = $4,850,000 (Project Cost) x 98% = $4,753,000

Cost to Locality (50% + 2% of project cost)

$9,700,000 x 50% = $4,850,000 + 4,850,000 (Project Cost) x 2% = $97,000, Total Cost to Locality = $4,947,000

4. VDOT's and Locality's share of reimbursement cost is the sum of Parts A and B.

ESTIMATED COST TO EACH ENTITY

	VDOT	Locality	UT Owner
PART A Cost	$102,900	$2,100	$195,00
PART B Cost	$4,753,000	$4,947,000	0
Total	$4,855,900	$4,949,100	$195,000

The agreement shown in Appendix 30 will be used to provide for the undergrounding of the aerial utility facilities. It will also provide for the reimbursement of the project's portion (if any) of the theoretical replacement facility cost (Part A) as well as the project's portion of the additional cost to relocate underground (Part B).

The Regional Utilities Manager or designee is to initiate the agreement, and circulate it to the appropriate parties for execution.

The agreement shown in Appendix 30 may be modified to cover work included in VDOT's plans to be performed by the project contractor.

Chapter 13 contains guidelines for submitting progress, final and lump sum billings.

Billings for non-betterment costs incurred to relocate the utilities underground shall reflect a deduction for the theoretical estimated cost for the in-kind replacement facility.

The Project's lump sum cost for the theoretical estimated cost for the in-kind replacement may be billed when the utility owner has incurred costs totaling that amount.

7.10 UTILITY FIELD INSPECTION REPORT

The Regional Utilities Manager or designee must complete all reports as soon as practical after the utility field inspection to include the following:

a. Resolve prior rights issues when applicable;

b. Complete Form UT-9. (Appendix 4);

c. Complete preparation of documentation for underground utilities;

d. Confirm utility field inspection using the appropriate letter contained in the RUMS. Send UT-4 to utility owner. (Appendix 5);

e. Enter utility field inspection data into RUMS; and,

f. Notify Environmental Division of any pending permits requirements.

CHAPTER 8

PREPARATION OF RELOCATION PLAN AND ESTIMATE BY UTILITY OWNER

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CHAPTER 8

PREPARATION OF RELOCATION PLAN AND ESTIMATE BY UTILITY OWNER

8.1 GENERAL

Immediately following the Utility Field Inspection the utility owners should begin the design for the relocation of their facilities and the subsequent preparation of cost estimates. Utility owners affected by the project should coordinate the planning and design with one another during the planning and design stage to avoid conflicts, added cost, and construction problems when the utility and project construction commences. The utility owners should also coordinate their planning through the Regional Utilities Manager or designee concerning such issues as easements, accommodation, construction related items and other matters pertaining to the preparation of the relocation plan and estimate.

The utility owner is responsible for the design of the new or relocated facility, and for ensuring that the design is in compliance with the standards and regulations of appropriate organizations.

When it has been agreed upon between the utility owner and VDOT to include relocation work in the project plans to be constructed by the transportation project contractor, the instructions found in Chapter 10 of the Manual should be followed.

8.2 PLANS/DRAWINGS/CADD FILES

VDOT will furnish one set of project plans and/or electronic project files to the utility owners for use during the Utility Field Inspection. A set of the project plans and/or electronic project files are to be used to show proposed replacement easements and is to be returned to VDOT with a request to obtain the easements.

The project plans should be used by the utility owner as a base plan for the utility relocation plan.

The project electronic files are produced using MicroStation Software, which is a Bentley Systems, Inc. product.

Utility owners should request these files through the Regional Utilities Manager or designee. The Regional Utilities Manager or designee will request these files from the PMO Section (Project Manager) or L&D (Project Designer) Request for digital files should be made in writing. Digital files should be provided to the utility company or Design Consultant using the VDOT FTP Site. Request for access should be made using form LD-699. A copy of this form is shown in Appendix 9.

The plan sheets and digital files will not totally reflect the final design of the transportation project. It will be the responsibility of the utility owner to update their relocation plans when revisions\changes are made to the transportation project plans.

8.2.1 REVISED TRANSPORTATION PROJECT PLANS

Plan revisions occur to the transportation project plans only after they are approved for right of way acquisition. The Regional Utilities Manager or designee is responsible to ensure that all plan revisions are distributed to the affected utility owners and the consultants performing work for the utility owners. Distribution is to be made using the appropriate utility letters found in the RUMS

The utility owner and/or consultant is responsible to substitute revised plans for those previously furnished and make the appropriate changes on their drawings.

8.3 UTILITY ACCOMMODATION POLICY

VDOT is responsible for controlling and protecting the public right of way and uses a land use permit approval system for such control. Generally, prior to any encroachment or installation of utilities within or over the right of way the utility owner must make application and obtain approval.

Prior to designing the installation of utility facilities within a VDOT controlled access right of way the utility owners should investigate other alternatives and coordinate the proposal with the Regional Utilities Manager or designee and/or the responsible District Land Use staff to assure that the proposal will be agreeable to VDOT.

The relocation of utility facilities required to accommodate transportation construction projects allows for an exception to the foregoing and has several conditions by which permit submission and approval is processed.

The utility owner must coordinate with VDOT (Utility Inspector) or appropriate Town or City Engineer when the utility owner believes it will be necessary to cut the pavement to facilitate the utility relocation work or interfere with traffic conditions.

Utility relocation work is performed for a transportation project by the affected utility owner, or its contractor, or is included in the transportation project plans for the work to be performed by the project contractor under the appropriate agreement. The utility owner must submit an as built permit application for work that has been completed and prior to VDOT making final payment to the utility owner for the cost incurred.

Permits are initiated by the utility owner for work on VDOT right of way and shall be prepared in accordance with the procedures outlined in the VDOT Land Use Permit Regulations (24 VAC 30-151).

8.3.1 POLICY FOR INSTALLATION OF UTILITIES WITHIN NON-CONTROLLED ACCESS RIGHT OF WAY

Utility relocations required to accommodate transportation project construction shall be designed and constructed to conform to the requirements of the Land Use Permit Regulations (24 VAC 30-151).

The minimum vertical clearance (18 feet) for overhead power and communication lines above the highway, and the lateral and vertical clearances from bridges shall also conform to the National Electric Safety Code of the U.S. Bureau of Standards.

The minimum bury depth for underground crossings must also be in compliance with the Federal, State and other applicable industrial codes governing the particular type product being transmitted.

8.3.2 POLICY FOR INSTALLATION OF UTILITIES WITHIN CONTROLLED, LIMITED ACCESS RIGHT OF WAY

VDOT's policy and procedure affecting the accommodation of utilities within Controlled Access right of way are included in the Land Use Permit Regulations (24 VAC 30-151).

The guidelines contained in this chapter are to provide a quick reference to the required clearances for aerial crossing, depths for underground crossings, and the longitudinal use of VDOT's controlled access right of way. The guidelines for the

accommodation of utilities within controlled access right of way included in this chapter are not all inclusive.

The occupancy within controlled access right of way with new utilities and relocation of existing utilities must be authorized by a permit or agreement and requires the approval of the Chief Engineer.

VDOT expects that the number of crossings of these types of facilities will be minimized, and that where approved, crossings will be located as nearly as perpendicular to the highway alignment as practicable.

The minimum vertical clearance (21 feet) for overhead power and communication lines above the highway, and the lateral and vertical clearances from bridges shall also conform to the National Electric Safety Code of the U.S. Bureau of Standards.

The minimum bury depth for underground crossings must also be in compliance with the Federal, State and other applicable industrial codes governing the particular type product being transmitted.

8.3.3 GENERAL GUIDELINES

a. When encasement pipe for an underground utility crossing is used on a fully controlled access highway, the encasement pipe shall extend from controlled access line to controlled access line. Encasement pipe shall be required where it is necessary to avoid trenched construction, to protect carrier pipe from external loads or shock, or to convey leaking fluids or gases away from the areas directly beneath the traveled way.

Encasement pipe shall be required if a utility has less than minimal cover, is near footings of bridges, utilities or other highway structures, crosses unstable ground, or is near other locations where hazardous conditions may exist. (See VDOT Land Use Permit Regulations 24 VAC 30-151)

b. The vertical clearance to overhead utility lines crossing controlled access highways shall be a minimum 21 feet. (See VDOT Land Use Permit Regulations 24 VAC 30-151)

c. Poles should not be placed within the controlled access lines in crossing situations except where no other viable alternative is available and only with VDOT consent.

d. All underground utility crossings shall be installed to a minimum depth of 36 inches or the minimum appropriate industrial code, whichever is greater. (See VDOT Land Use Permit Regulations24 VAC 30-151)

e. Manholes and other points of access to underground utilities will not be permitted within the right of way of a fully controlled access highway, except for unusual circumstances, and then only with the approval of the Chief Engineer. (See VDOT Land Use Permit Regulations 24 VAC 30-151)

f. Manholes and other points of access to underground utilities may be permitted within the right of way of a partially controlled access highway, only when they are located beyond the ditch line and/or toe of slope as planned for future widening, if any. (See VDOT Land Use Permit Regulations 24 VAC 30-151)

g. New utilities will not be permitted to be installed longitudinally within the controlled access lines of any highway, except that in special cases such installations may be permitted under strictly controlled conditions and then only with the approval of the Chief Engineer. However, in each such case the utility owner must show the following:

(1) That the accommodation will not adversely affect maintenance safety, design, construction, operation or stability of the highway.

(2) That the accommodation will not interfere with or impair the present use or future expansion of the highway.

(3) That any alternative would be contrary to the public interest.

(4) In no case will parallel installations be permitted which involves tree removal or severe tree trimming.

8.4 MINIMUM REQUIREMENTS FOR RELOCATION PLAN & ESTIMATE

The utility owner is responsible for preparing relocation plans and estimates after the Utility Field Inspection issues have been resolved. The plan and estimate must have a minimum of detail and information to be accepted and approved by VDOT.

The plans and estimates will include as a minimum the information outlined below.

8.4.1 PLAN

When preparing its plan of relocation, the utility owner may use as its base plan the VDOT plans furnished at Utility Field Inspection, or VDOT electronic project

files which can be furnished upon request. See section 8.2 of this chapter for requesting digital files.

As a minimum the plans must include the following components where appropriate:

a. Project centerline or baseline from which the utility facilities will be referenced;

b. Existing and proposed right of way lines;

c. North Arrow;

d. Major construction features of the proposed roadway that involve the existing or proposed utility facility (i.e. curb and gutter, edge of pavement);

e. Profiles or cross sections are required for aerial and underground crossings of the proposed roadways and where utilities are proposed within transportation project construction limits. Profiles or cross sections are required where utilities are involved with other construction features of the project such as storm drainage, drainage ditches, entrances, sound walls, retaining walls, temporary detours, etc.;

f. Existing and proposed utility facilities. Necessary detail showing size of major appurtenances such as poles, wires, conductors, cables, pedestals, hand holes, manholes, for both the existing and proposed facility must be shown on the plan;

g. Length of facilities must be shown from which quantities are computed; and,

h. Legend to delineate the existing and proposed facilities.

i. Plans, cross section and or profiles are to be submitted on 23”x35” sheet or other standard sizes as approved by the Regional Utilities Manager or designee.

j. Pole sizes, attachment heights, sag (worst case) and cable size are to be shown on the profiles or cross section.

k. Pedestals, hand holes, manholes, cables and conduits sizes and depths are to be shown on the profiles or cross sections.

8.4.2 ESTIMATE

When preparing an estimate, the utility owner must use an appropriate estimate format to provide a detailed and specific estimate of cost. The estimate must be broken down into various categories and must include a list of individual line items that are eligible for reimbursement.

Estimate Format, Form UT-11 is found in Appendix 9 of this Manual.

Utility owners that have adopted their own estimate format and had it approved by VDOT, may use their own forms instead of Form UT-11.

The estimate must include the following components and attachments where appropriate:

a. Detailed Estimate on Form UT-11 or similar format. Line item costs to be provided if appropriate are:

(1) Engineering;

(2) Right of Way Acquisition;

(3) Construction costs to include Company and Contract Labor, Material, Salvage Credit, Equipment, Handling & Supply Expenses, Other Expenses, and the appropriate Additives. Note: If temporary work is required, the materials to be installed and removed must be itemized separately;

(4) Other Company Overheads (must show overhead rate);

(5) Credit for Expired Service Life. (Section 8.12);

(6) Credit for Betterment. (Chapter 3); and,

(7) The Project Prorate. (Chapter 3).

8.4.3 OTHER DOCUMENTS

a. Real Property Interest Documentation. Requirement for Real Property Interest Documentation is found in Sections 2.4, 2.5 and 7.3.4;

b. Narrative Statement (Example Shown in Appendix 10) (Section 8.6);

c. Work Schedule (Example shown in Appendix 11) (Section 8.7);

d. Request to Use Contract Forces (Section 8.8) or Company Forces;

e. Form UT-9 or a computation showing how the project prorate was determined; and,

f. Identify relocation work that will require a special provision in the project contract. (Section 8.10).

g. Cover Letter will need to include statement if joint design/use and list company names.

h. Copy of Joint use letter or notification through NJUNS (National Joint Utilities Notification System).

Methods for computing the prorate are found in Chapter 3 of this Manual.

Form UT-9 or a computation must be included in the estimate showing how the project prorate was determined. The prorate will be used to arrive at the total non-betterment cost to VDOT. Alternatives, including formulas, for computing the prorate are found in Chapter 3 and may be used when mutually agreed between the utility owner and VDOT.

8.5 LUMP SUM ESTIMATES

Lump Sum estimates will be approved when the following is satisfied:

a. Only when the lump sum arrangement has been agreed upon between the utility owner and VDOT.

b. The cost is $10,000 or less.

c. Lump Sum Payments can be approved when VDOT's composite share of the project cost is 15% or less of the total estimated cost of the work involving substantial amount of betterment.

d. A detailed plan and estimate where VDOT's portion can be readily identified.

e. The proposed cost is based upon the appropriate cost responsibility determination.

Lump sum estimates may be approved under the master agreement or by exchange of letters between the utility owner and VDOT.

Where a major change occurs in the scope of the work, a revised plan and estimate must be submitted for approval and the original authorization will be rescinded. Section 12.10 covers changes in approved relocation work.

Additional work required during project construction will be handled as a separate issue.

Lump sum estimates on federal participating projects require FHWA approval when the cost exceeds $100,000.

Procedures for processing lump sum billing are covered in Chapter 13. An itemized record of cost is not required to accompany the final bill.

The estimate format UT-11 shown in Appendix 9 may be used for lump sum estimates.

8.6 NARRATIVE STATEMENT

A description of the existing facility and a similar description of the proposed facility should be written to adequately describe the work required. The type of utility including the capacity, number of cables or conductors, poles with size and class, and other major components of the facility affecting the cost of the project should be described in sufficient detail for the reader to easily understand the plan of relocation.

Activities that impact the cost and the work schedule such as rock excavation, tree trimming, difficult access to work site, or coordination with other owners on joint use relocation or the project contractor, should be made a part of the narrative statement.

Where betterment is involved, the utility owner should include a statement explaining what the betterment will consist of and where it will be located.

Plans and estimates being prepared for utilities such as water, sanitary sewer or gas lines should include a similar description in the narrative statement. An example narrative statement is found in Appendix 10 of this Manual.

8.7 UTILITY WORK SCHEDULE

The utility owner, furnishing dates of its planned activities, prepares the work schedule. The schedule should take into consideration the schedules for various phases of the transportation project including, the expected dates for approved right of way plans, completion of right of way and easement acquisition, project advertisement, award of the transportation contract, and commencement of project construction.

The utility owner is to pursue completion of the work at the earliest possible date in order to minimize interference with the transportation project construction. Planning by the

utility owner should be coordinated with the transportation project schedules and be as realistic as possible.

An example work schedule is found in Appendix 11.

8.8 REQUEST FOR USE OF CONTRACTORS BY UTILITY OWNERS

To be eligible for reimbursement, the utility owner must obtain VDOT approval prior to using contract forces to perform any phase of the relocation construction.

When the utility owner is not adequately staffed and equipped to perform relocation construction with its own forces, at a time convenient to and in coordination with the associated transportation project construction, the work may be done using contract forces under one of the following contract arrangements:

a. A contract awarded by VDOT or the utility owner to the lowest qualified bidder based on appropriate solicitation.

b. Inclusion as part of VDOT's transportation construction contract awarded by VDOT and agreed to by the utility owner.

c. Under an existing continuing contract, provided the costs are reasonable.

d. A contract for low cost incidental work, such as tree trimming and the like, awarded by VDOT or the utility owner without competitive bidding, provided the costs are reasonable.

The utility owner must request the use of contract forces when submitting its plan and cost estimate.

If during the plan and estimate phase, the utility owner anticipates using its forces to perform the relocation construction, and it later becomes necessary to use contract forces, the utility owner must request their use and obtain approval prior to beginning its work.

An acceptable request must satisfy the requirements for using contract forces and must contain the following components:

a. The reason for requesting the use of contract forces:

(1) The utility owner is not adequately staffed or equipped to perform the work with its own forces, or

(2) It is cost effective to use contract forces.

b. The type or phase of work where contract forces will be used:

(1) Tree removal or trimming.

(2) Line work.

(3) Conduit work.

(4) Other specified work.

c. The type of Contract method:

(1) Low Bid Basis:

Work performed under a contract let by the utility owner. The low bid basis is the employment of a contractor selected through competitive bidding by the

solicitation from at least three contractors, and making the selection on the basis of the lowest qualified bidder. The utility owner must provide VDOT a list of the contractors from which the bids were requested and a copy of the bids received.

(2) An existing Continuing Contract.

A continuing contract is a written contractual agreement between a utility owner and a contractor for which the term of the contract is definite, and must contain the following to be acceptable by VDOT.

A. The contract must cover a specified period of time.

B. The amount of work is indeterminate and unspecified for which various types of work units, unit charge rates and supplier of materials to be used are specified.

C. The rates for equipment may be included in the unit price charges for each type of work listed or may be specified and charged separately.

D. The contract must be in normal use by the utility owner.

The continuing contract method cannot be used when the type of units of work required for the relocation are not covered by the contract.

The unit rates used for VDOT relocation must agree with the pre- established rates for the various types of work units specified in the contract.

The existing continuing contract must remain in effect throughout the entire time the relocation is being performed. Deviations from the terms of an existing continuing contract used in connection with a reimbursable relocation must be approved by VDOT.

8.9 TEMPORARY WORK

Temporary work required to facilitate transportation project construction will be included and identified separately in the utility owner's plan and estimate. Temporary work will be paid for on the same prorate basis as the permanent adjustment. Materials recovered from temporary use and accepted for reuse by the utility owner shall be credited to the project at prices charged to the job, less 10 percent.

Temporary work performed for the transportation project contractor's convenience shall be at the contractor's expense as outlined in Section 105.08 of VDOT Road and Bridge Specifications.

Temporary work performed solely for the convenience of the utility owner shall be at the utility owner's expense.

8.10 SPECIAL PROVISIONS

The primary purpose of the utility special provision is to make the project contractor aware of activities that will occur within the project limits during the life of the project and require mutual coordination between the utility owner and the project contractor. Information

should be provided as accurate and specific as possible to assist prospective bidders with the preparation of bid proposals, and so the contractor can plan and execute construction operations to avoid damage and disruption to utility facilities.

The Regional Utilities Manager or designee will determine a need for inclusion of special provisions in the project contract, based on knowledge gained while working with the utility owners throughout the planning phase of the utility adjustment.

A special provision will be required when utility facilities involve or impact construction activities or require special attention and protection by the project contractor.

The involvement or impact to the project contractor's operation may occur, when it becomes necessary that utility relocations be performed in conjunction with the project construction, or when relocated or existing utility facilities are encompassed within the construction limits and are in close proximity to construction, that would require the project contractor to perform extra or special work to protect and avoid damage or disruption to the utility facility.

Where utility adjustments must be coordinated with certain phases of project construction, it is the utility owner’s responsibility to provide sufficient information regarding time frames, etc., in order that a complete and reliable document can be prepared.

The special provision does not relieve the utility owner of the responsibility for making every effort to complete utility relocations in an expeditious and timely manner.

Special provisions will be per the format set by the Construction Division.

The special provision will be completed by the Regional Utilities Manager or designee and furnished to the State Utilities and Property Manager. The State Utilities and Property

Manager or designee will review and forward to the Construction Division. The special provision can be sent to the Construction Division by electronic mail. The Construction Division has requested review and concurrence by the State Utilities and Property Manager's office prior to submittal for inclusion in the bid proposal and contract.

It is important that certain wording be understood and used appropriately in the preparation of special provisions.

For this purpose the following shall apply:

a. Shall. A mandatory condition. To be used when referring to an item to be performed by the transportation project contractor.

b. Will. To be used when referring to an item to be performed by the utility owner or VDOT.

c. Should. An advisory condition. Where used, it is considered to be advisable usage; recommended but not mandatory.

d. May. A permissive condition, which may provide options.

e. Approximate. To be used to describe distance and time frames of utility work as it relates to certain roadway features, such as centerline or project construction, and expected schedules for certain phases of work to be performed in conjunction with the contractor's operations.

The general scope of utility work and the necessary coordination with project construction should be outlined using centerline stations or other appropriate references.

An example Special Provision can be found in Appendix 19.

8.11 BETTERMENT

Betterment occurs when the relocated utility is upgraded at the option of the utility owner. In such cases, VDOT will only pay for relocation in-kind, not for betterment.

Construction of a replacement facility that has greater capacity or with more expensive materials than the project requires, or than are present in the existing facility is considered betterment. A design requiring an increase in the size, capacity or the use of more expensive material of a utility facility that is attributable to the transportation project is not considered betterment.

If the utility owner can document that it is more economical to provide an upgraded replacement facility than the existing facility, a betterment credit will not be required. Such documentation must be provided with the utility owner's plan and estimate.

Replacement of existing facilities with larger conductors and cables by power and telephone companies may not be considered betterment when the facility being replaced does not exceed VDOT's accepted standard replacement for such facility. VDOT accepted standardized power conductors and telephone cable sizes regularly produced and commonly used are shown in Appendices 12 and 13.

When betterment can be clearly identified, the utility owner must provide a comparative breakdown, showing material and other associated costs of a replacement in-kind and the replacement with betterment in order to identify the betterment credit due in the estimate. The comparative breakdown must be added as an attachment to the estimate.

When relocation involves betterment, and the complexity of the project makes it difficult to separate the specific items where betterment is incurred, more extensive methods for determining the betterment credit may be required.

In such cases, the utility owner will provide two estimates, which will be used to determine the betterment credit. One estimate is for the in-kind replacement cost only, and the other is for the entire project cost including betterment. Normally, betterment credit is determined by comparing the in-kind estimated replacement cost with the estimated cost for the entire project.

In situations where existing fiber optic cables are being relocated for the transportation project, the in-kind replacement can be easily determined. However, when existing copper or coaxial cables are replaced with fiber optic cable, the cost may be less, unless the installation of electronic equipment is required on each end. The determination of an in-kind replacement is difficult to quantify because of the technological changes.

Under certain conditions, the Cost Analysis (Section 3.3.1) method may be used to determine betterment.

The lump sum reimbursement (Alternate Method for Reimbursement, Section 3.4) of the facilities in conflict with the project construction, determined to be project expense, will be considered when various types of conversions are necessary or planned by the utility owner.

If there are significant changes in the utility relocation, betterment percentages must be recalculated prior to final billing.

8.11.1 CONDUIT BETTERMENT

Where it has been agreed between the utility owner and VDOT that an underground conduit system is an acceptable method of relocation to replace an aerial facility, betterment will be determined on the following basis:

a. One conduit will be allowed for each circuit plus one conduit for a spare. Betterment not required.

b. One conduit proposed for each circuit proposed, plus two or more conduits. Betterment credit will be required for all conduits exceeding the one spare allowed.

The betterment credit must be allowed for the additional costs of material, extra trenching cost, labor and other associated costs.

Whenever relocation of an existing underground conduit system is necessary, the number and size of the existing conduits will be replaced in kind, unless betterment is requested by the utility owner. The number or size of conduits that exceed the existing system will be considered betterment.

The method for computing betterment credit is outlined in Chapter 3 of this Manual.

8.12 EXPIRED SERVICE LIFE CREDIT

Credit to the transportation project will be required for the accrued depreciation of a major utility facility being replaced, such as a building, pumping station, filtration plant, power plant, substation, or other similar operational unit. Such accrued depreciation is that amount based on the ratio between the period of actual length of service and total life expectancy applied to the original cost. Credit for expired service life is to be computed by the utility owner and included in the relocation estimate.

When the facilities, including equipment and operating facilities, equipment not being replaced, but which is being rehabilitated and/or moved as necessitated by the transportation project, no credit for accrued depreciation is needed.

Credit for accrued depreciation shall not be required for a segment of the utility's service, distribution or transmission lines.

Expired service life credit for utility relocation included in VDOT plans is also covered in Section 10.9.

8.13 DATE FOR SUBMITTING RELOCATION PLANS AND ESTIMATES TO VDOT BY THE UTILITY OWNER

The utility owner should submit the utility relocation plan and estimate to the Regional Utilities Manager or designee by the date established during the utility field inspection.

8.14 NUMBER OF PLANS AND ESTIMATES REQUIRED

The utility owner must submit seven copies of the plan and estimate to the Regional Utilities Manager or designee for approval on urban projects and four copies on all other projects.

The Regional Utilities Manager or designee must distribute the plans and estimates as follows:

a. URBAN PROJECTS. One copy /State Utilities and Property Manager, two copies / Regional Utilities Manager or designee and three copies to be used to prepare agreement.

b. ALL OTHER PROJECTS. One copy /State Utilities and Property Manager, and two copies, Regional Utilities Manager or designee.

8.15 TREE TRIMMING AND STUMP REMOVAL

Prior to beginning any utility relocation work within VDOT right of way, the utility owner shall contact the District Environmental Manager to review the requirements for tree removals or trimming on each individual project. The VDOT contact person's name will be indicated in the letter of authorization.

The cost of tree removal, tree trimming, and stump removal as indicated in this guide shall be deemed an eligible expense and part of the utility relocation cost. As such, it will be reimbursed in the same manner as the utility relocation.

8.15.1 TREE REMOVAL

In most cases the utility company will be responsible for tree removal and clearing the right of way necessary to permit the utility relocation.

For aerial adjustments, this is to include cutting of the tree to near ground level. For those trees that are within the limits of the construction for the roadway project, the stumps not interfering with the proposed installation may be left in place and they will be removed by the roadway contractor on rural projects, but must be removed on urban projects or as directed by the Regional Utilities Manager or designee . For those stumps outside of the limits of construction, they shall be handled as indicated in Section 8.15.3 of this Chapter.

All wood, limbs and other debris associated with the tree removal and clearing shall be removed from the job site unless specific arrangements have been made for the property owner to retain the wood.

Restoration and seeding of the disturbed areas within the transportation project construction limits is the responsibility of the utility owner, unless it is a part of a separate arrangement with the property owner.

8.15.2 TREE TRIMMING

Whenever practical, the utility owner shall trim a tree in lieu of cutting. Tree trimming shall generally be performed in accordance with acceptable practices of the Arbor Foundation and as agreed to with the District Environmental Manager's representative. Unless agreed to by the District Environmental Manager's representative, single side trimming will not be permitted.

Should the property owner prefer to have a tree removed after trimming has been accomplished by the utility owner, then the tree shall be removed in accordance with the practices outlined for Tree Removal included in this section.

8.15.3 STUMP REMOVAL

Stumps which are located within the limits of the proposed construction may be left for the roadway contractor to remove on rural projects, provided they do not interfere with the proposed utility relocation and can be removed without interfering with the relocated utility line. Stumps must be removed on urban projects.

The utility owner shall remove any stumps removed during the utility installation work from the job site.

Stumps resulting from the removal of trees for utility relocations that are located outside of the construction limits may be cut off at ground level and left in those

areas where the adjacent property is either woodlands, farm lands, or generally not developed into commercial or residential use.

Stumps remaining from tree removal which fall into a landscaped area that is being maintained as a residential lawn or a commercial area shall be grubbed or ground to a depth of twelve inches below existing ground level. In cases where stumps are ground, the excavation shall be filled and the area restored to blend in with the existing landscape.

8.16 REVISED UTILITY RELOCATION PLAN AND/OR ESTIMATE REQUIREMENTS

The utility owner is required to submit revised utility relocation plans and/or estimates when the following occurs:

a. When major changes occur for any reason, from the method of relocation approved by VDOT for the relocation work. See Section 12.10.2

b. When the actual cost exceeds the authorized amount. The utility owner may then bill 90% of the incurred cost through progress billing. See Section 12.11.

c. When lump sum estimates have been authorized and a major change occurs in the scope of work. See Section 8.5.

d. When the actual cost overruns the approved estimate by 15% and that cost is greater than $25,000. See Section 13.3

The utility owner must submit the revised plans and/or estimates to the Regional Utilities Manager or designee and receive approval prior to proceeding with the revised relocation plan.

The Regional Utilities Manager or designee must follow the procedures outlined in Chapter 11 for processing utility owner's relocation plans and estimates.

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CHAPTER 9

CONSULTANTS FOR IN-PLAN WORK

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CHAPTER 9

CONSULTANTS FOR IN-PLAN WORK

9.1 GENERAL

There are many instances when the utility owner does not have in-house staff available to design utility relocation plans to be included in the transportation contract. This chapter covers the steps necessary to have the Virginia Department of Transportation (VDOT) employ a consultant engineering firm to perform the design services necessary to prepare the utility plans that will be included in the VDOT project.

9.2 ENGINEERING FIRMS SELECTED BY VDOT

The Attorney General's Office has determined that VDOT cannot be a party to a consultant-engineering contract when the consultant firm was not procured by VDOT under the Public Procurement Act. VDOT, under the procedures outlined in the Public Procurement Act and on a periodic basis, advertises and selects consultant-engineering firms to design utility relocation plans for a project or in a geographic area. These firms are retained on an "as-needed" basis to design utility relocation plans that are to be made a part of a VDOT contract.

When the utility owner desires to have the relocation of its facilities included in the transportation contract and the plans designed by VDOT’s consultant, a letter of request shall be sent to the Regional Utilities Manager or designee. The letter shall state that the utility owner does not have available staff to design the plans and requests VDOT's utility design consultant to provide the engineering services for this purpose. A sample letter is included in Appendix 16.

9.3 CONSULTANT ENGINEERING FIRMS SELECTED BY THE UTILITY OWNER

If a utility owner does not want to use VDOT's consultant, the utility owner may procure a consultant firm independently from VDOT. When VDOT is to participate in the cost of the consultant services, approval must be obtained through VDOT by the utility owner prior to any engineering work being done.

Political subdivisions of the State, i.e., cities, towns, authorities, etc., must comply with the Public Procurement Act as well as adopt a policy for procuring services. Legislation does allow for selection of a consultant firm through competitive negotiations. Under this procedure, two or more qualified consultants are requested to submit cost proposals for the specific work. The political subdivision makes the selection and requests VDOT's approval.

With the approval of VDOT, a utility owner may also use a firm under a continuing contract. In all instances where the utility owner selects the consultant engineer, the engineering costs to be borne by the project must be submitted under the plan & estimate concept (see Chapter 8).

The State Hydraulics and Utilities Engineer, State Utilities and Property Manager and/or Regional Utilities Manager or designee should be involved in the meetings with the consultant when the scope of services, time frames for submission of plans, etc. are established.

9.4 COST RESPONSIBILITY FOR CONSULTANT ENGINEERING COSTS

When the construction cost of the proposed relocation of an existing utility facility has non-betterment prorated cost, the consultant engineering cost will also be prorated. The non-betterment engineering cost is to be prorated by a method as outlined in Chapter 3.

9.5 BETTERMENT IN CONSULTANT ENGINEERING COSTS

When betterment of the existing utilities occurs, normally the cost of the engineering needed to design the betterment facilities shall be borne 100% by the utility owner. However, there are times when the engineering betterment cannot be separated from the overall engineering costs and a negotiated amount must be agreed upon by the utility owner and VDOT.

If the betterment is a small incremental increase in the size of an existing facility, i.e., an existing 8 inch sanitary sewer is increased in size to a 12-inch sanitary sewer, there would be very little if any additional cost to design the 12 inch sanitary sewer. The utility owner would not bear any additional cost for the engineering design required for this type of betterment.

There are times when an existing utility facility is being relocated and the utility owner requests the relocated facility to be extended beyond that which is required by the project, or add new utilities where none previously existed. The cost to engineer these types of betterment is to be borne 100% by the utility owner unless the project requirements dictated the additional work. Therefore, it will be necessary to separate the betterment engineering cost from the project engineering cost. If possible, the utility owner should enter into a separate agreement with the consultant for these betterment- engineering services. If the utility owner is unable to enter into a separate agreement, the betterment

cost can be included in the agreement between VDOT and the consultant. The utility owner must agree in writing to reimburse VDOT the additional cost for the betterment engineering prior to VDOT authorizing the consultant to proceed with the design. (See Appendix 16)

9.6 CONSULTANT AGREEMENTS

Each consultant selected under the on-call concept will enter into an agreement with VDOT. This agreement will stipulate the total dollar value that can be authorized, and the time frame within which work can be authorized by VDOT. Upon execution by the consultant engineering firm and VDOT, individual project authorizations can be made.

There are occasions when it would be in VDOT's best interest not to use the on-call consultant on a particular highway project. This may be due to the high estimated engineering cost, complexity of the work, or a special type of engineering expertise is needed. Legislation allows VDOT to solicit proposals from interested engineering firms for that project.

The State Utilities and Property Manager or designee must approve any consultant other than the on-call consultant for use on a project specific contract.

9.7 SCOPE OF SERVICES/REGIONAL AGREEMENT

The Regional Utilities Manager or designee will notify the State Hydraulics and Utilities Engineer's office when a project is ready for the assignment of an in-plan on-call consultant. A preliminary cost estimate for the consultant services shall be prepared by the State Hydraulics and Utilities Engineer or designee based upon the information

furnished by the Regional Utilities Manager or designee. The files are to be documented accordingly.

The scoping meeting will be scheduled by the Regional Utilities Manager or designee in coordination with the State Hydraulics and Utilities Engineer or designee and the Consultant for the purpose of reviewing the project requirements and services to be provided by the consultant engineer. A copy of this letter is to be sent to the utility owner.

The consultant is to review the project information and the project plans to become familiar with the construction requirements. If discrepancies are found and clarification is needed in the information furnished, the consultant shall notify the State Hydraulics and Utilities Engineer or designee or Regional Utilities Manager or designee.

In advance of the scoping meeting the consultant will provide a list of conflicts which includes an evaluation of the following:

a. Location of utilities as defined by the Guidelines For Relocation of Utilities From Travel Areas (Section 15.2);

b. Asbestos cement pipes and cast iron pipes with lead joints where the cover will be reduced to 2 feet or less at subgrade, and where the cover will be increased by an additional 5 feet at finished grade;

c. Utilities that cannot be maintained/serviced by the utility owner due to excessive fill material or permanent structures placed over top; and,

d. Utilities that are in danger due to highway structures being constructed near them.

At the scoping meeting, any planned betterment of the utilities at the request of the utility owner is to be discussed. The utility owner must agree upon time frames, permit applications and other tasks to be performed by the consultant, and the State Hydraulics and Utilities Engineer's representative.

The consultant shall record minutes of the scoping meeting and furnish copies to all parties in attendance prior to submitting the project proposal.

9.8 ON-CALL CONSULTANT PROPOSAL

After the project-scoping meeting, when all questions have been answered and all ambiguities have been resolved, the consultant firm is to prepare a proposal to perform the engineering services required for the project. This proposal is to contain as a minimum, four elements:

a. Scope of services;

b. Time frame established by the State Hydraulics and Utilities Engineer or designee and/or Regional Utilities Manager or designee to accomplish the required tasks;

c. Cost proposal; and,

d. Payment schedule.

9.8.1 SCOPE OF SERVICES

The scope of services shall:

a. Specify what services or tasks are to be performed by the consultant, utility owner, and VDOT;

b. Specify what format the final plans are to be delivered, i.e., electronic project files and signed and sealed PDF files etc.;

c. Provide a detailed description of the types of conflict and the reasons the facilities should be relocated; and,

d. Indicate betterment design.

9.8.2 TIME FRAME

The time frame shall set the dates for established submissions, which may include, but not be limited to, the following:

a. Set the date 50% review plans are due;

b. Set the date 90% review plans are due; and,

c. Set the date 100% final plans are due.

9.8.3 COST PROPOSAL

The cost proposal shall:

a. List the tasks to be performed by the consultant;

b. Show the number of hours to accomplish each task for each classification of employee;

c. Show the calculations used to compute the estimated engineering costs using approved fixed billable rates; and,

d. Include betterment-engineering costs.

The consultant shall submit two copies of the proposal to the State Hydraulics and Utilities Engineer or designee and one copy to the Regional Utilities Manager or designee within the time frame agreed upon at the scoping meeting.

9.8.4 PAYMENT SCHEDULE

The payment schedule shall indicate what stage of plan development that billings will be rendered by the consultant.

Lump sum billing shall be 50% of the authorized amount upon submission of 50% plans; 90% of the authorized amount upon submission of 90% plans; and, 100% of the authorized amount upon acceptance of final plans by VDOT.

Billings for cost plus fixed fee proposals shall be submitted as costs are incurred plus an amount of the net fee commensurate with the percent of work completed.

Proposals for fixed billable rates shall be billed as the hours are incurred and charged to the project.

9.9 CONSULTANT AUTHORIZATION

After the consultant's proposal has been reviewed by all parties, the negotiations are final, and the proposal is found to be reasonable and acceptable, the State Location and Design Engineer or designee will authorize the consultant to proceed with the design of utility relocation plans. If Right of Way plans have been approved and right of way funds

authorized, the consultant is to be authorized under the right of way project number. The PE project number is used when the right of way plans and funds have not been authorized.

9.10 CONSULTANT BILLINGS

Consultant billings for the design of utility relocation plans that will be included in the highway contract shall be sent to the State Hydraulics and Utilities Engineer or designee. When a portion of the consultant cost is to be borne by the utility owner, the State Hydraulics and Utilities Engineer or designee upon acceptance of the final plans will submit a billing to the utility owner for its share.

The consultant shall submit billings in accordance with the schedule in the authorized proposal. (The Consultant Tracking Information form is shown in Appendix 31). Billings for consultant services are not to be submitted for less than $500.00 per voucher unless it is a final billing. VDOT will furnish forms to the consultant for billings.

The total billing cannot exceed the amount of authorization (See Section 13.3.4).

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CHAPTER 10

UTILITY RELOCATIONS INCLUDED IN VDOT'S CONTRACT

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CHAPTER 10

UTILITY RELOCATIONS INCLUDED IN VDOT'S CONTRACT

10.1 GENERAL

There are many advantages to both the utility owner and the Virginia Department of Transportation (VDOT) to include utility relocation work in the transportation project. A major advantage to the utility owner is not having to be involved in the bidding process and contract administration. VDOT's advantages include having one contractor responsible for both, the project construction and the relocation of the utilities. This eliminates coordination problems between two companies working at the same time in a confined area.

Whenever a utility owner desires to include new utility work in VDOT's transportation project contract, the utility owner shall request preliminary approval for the new facility to be placed on VDOT right of way prior to having the plans completely designed. This request shall be submitted to the Regional Utilities Manager or designee for review in the field. Upon completion of the field review, the request is to be transmitted to the State Utilities and Property Manager/State Hydraulics and Utilities Engineer or designee along with the district's recommendations and justifications. The State Hydraulics and Utilities Engineer should have the appropriate divisions in the central office review the request and obtain all comments prior to making a final decision.

10.2 UTILITY PLAN REQUIREMENTS

Utility adjustment plans shall be designed in accordance with VDOT's Road and Bridge Specifications, Road and Bridge Standards, CADD User and Informational Manual and Road Design Manuals. In addition, utilities that will be relocated or installed within

VDOT's right of way, must be in compliance with the Land Use Permit Regulations (24 VAC 30-151) and Sections 8.3 through 8.3.3 of this manual.

Upon request, VDOT will furnish the designer all available CADD files of the project plans on which the utility plans are to be designed (Section 8.2). The consultant shall make the request for CADD file on the current ITD form. The request shall be made to the Regional Utilities Manager or designee when the VDOT project is designed in the District or to the State Hydraulics and Utilities Engineer or designee when the VDOT project is designed in the Central Office.

When preparing the utility relocation plans, the designer should consider the following:

a. Test Hole Data Sheet;

b. Locations and material type of other utilities that will remain in place;

c. Locations of other utilities that will be relocated to a new position;

d. Location of drainage facilities including storm water management basins;

e. The transportation project's Sequence of Construction (SOC)/Traffic Management Plan (TMP);

f. Location of proposed roadway lighting and signal standards (not normally shown on roadway plans);

g. Location of bridge substructure elements;

h. Ability to maintain relocated facility;

I. Future connections to the relocated facility; and;

j. Extension or expansions to the present system;

k. Proposed easement needs for relocated facilities

l. Areas where a permit coordination with the Environmental Section will be necessary, i.e., wetlands, stream crossings, etc.;

m. Location of hazardous waste sites;

n. Sequence of construction and constructability;

o. Sound wall construction.

p. Prepare documents for utility owner to obtain RR permit.

10.3 UTILITY PLANS INCLUDED IN VDOT'S CONSTRUCTION PLANS

To assure that utility plans are complete and meet the requirements of both the utility owner and VDOT, review plans are furnished by the consultant to be reviewed at established stages of plan development as outlined in sections 10.3.1,2,3. The designer shall submit to the State Hydraulics and Utilities Engineer or designee and/or Regional Utilities Manager or designee the extent of utility easement requirements on the project.

10.3.1 50% DESIGN PLANS

These plans shall show the routing of the main utility lines, indicating the direction of feed. The locations, materials, etc., of utilities that are to be constructed within VDOT right of way shall conform to the requirements of the Land Use Permit Regulations (24 VAC 30-151).

The 50% design plans shall show the plan view of the existing and proposed utilities, and profiles shall be shown of the proposed gravity sanitary sewer. Normally it is not necessary to show the service connections to the mains at this time. Estimated quantities of major items should be provided at this time.

At the 50% design review meeting, all proposed bridge attachments should be coordinated for inclusion into the bridge plans. (See Section 7.6 for information on bridge attachments).

The consultant designer shall submit 50% design plans through Falcon in CADD and pdf format and provide a hard copy set to the Regional Utilities Manager and State Utilities Engineer. A construction estimate including betterment shall be submitted at this time as well. The utility owner shall also be provided the required number of prints as established at the scoping meeting, when a consultant designs the plans. The consultant shall provide the Regional Utilities Manager or designee with a copy of their transmittal letter to the utility owner. A sufficient amount of time, approximately two weeks, should be allowed for each party to review the plans prior to the 50% review meeting. The designer of the utility plans shall schedule the meeting with an invitation to all utility owners requiring coordination on the project invited to attend. Each party receiving prints shall make an in-depth review of the plans to assure that all criteria have been included into the utility plans. Comments regarding the design shall be shown on the utility plans or detailed on a written comment sheet. The marked prints/comment sheet shall be furnished to the designer. Each party shall retain a copy. The Regional Utilities Manager or designee may determine a review meeting is not necessary. In lieu of the meeting written comments shall be provided by each party as described above.

In addition, if the utility owner wants a proprietary item to be part of the utility relocation, it will be necessary for that utility owner to advise the State Hydraulics and Utilities Engineer or designee in writing (See Appendix 17 for a sample letter).

The State Hydraulics and Utilities Engineer or designee, after conferring with the Location and Design Roadway Designer will furnish to the designer a base plan sheet number. This base plan sheet number will be the prefix number on all of the utility plan sheets for that utility owner on that project. The utilities plan view sheet numbers shall correspond to the roadway plan view sheet numbers. A different base sheet number will be required for each set of utility relocation plans on the same project.

10.3.2 90% DESIGN PLANS

The following are to be included in the 90% plans:

a. Title Sheet with Legend & Index (if required);

b. Summary Sheet;

c. General Notes;

d. Sequence of Construction (if required);

e. Material Notes;

f. Plan Details; and,

g. Plan and Profiles of relocated utilities.

h. New service connections and other appurtenances

For all practical purposes, the 90% Design Plans should be 100% complete. The designer shall furnish a list of betterment items to review and discuss at the 90% review meeting. The consultant designer shall submit 90% design plans through Falcon in CADD and pdf format and provide a hard copy set to the Regional Utilities Manager and State Utilities Engineer. An updated construction estimate including betterment shall be submitted at this time. The required number of prints shall be provided to the utility owner, as well as any marked prints or comment sheets received at the 50% review meeting. The designer shall schedule the 90% review allowing approximately two weeks for review by the other parties. Each person reviewing the prints shall compare their previous comments to the 90% Design Plans and assure all comments were incorporated. One set of the 90% Design Plans shall be marked with the reviewer's comments and returned to the designer.

If major changes were requested during the 90% review, another meeting to review the changes may be required.

The utility owner shall provide the Regional Utilities Manager or designee an estimate of incidental costs at the 90% review (See Section 10.4).

VDOT's Railroad Coordination Section shall be furnished three set of pertinent plans sheets when a relocated utility crosses railroad right of way. The plans shall include the plan view, profile and detail sheets. A permit application to occupy the railroad right of way shall be completed by the utility owner or their authorized representative and included with the plans. All information should be submitted to the Railroad Coordination Section a minimum of six months prior to the planned

advertisement date of the transportation project. The utility owner may obtain the railroad permit for their proposed facilities.

10.3.3 100% FINAL DESIGN PLANS

After all comments from the 90% meeting have been incorporated into the utility plans by the designer, final plans shall be submitted to the State Hydraulics and Utilities Engineer or designee, Regional Utilities Manager or designee , and utility owners for final review. After satisfactory review of the 100% plans, the designer shall submit hard copies as requested by the Regional Utilities Manager and the utility design CADD files including the signed and sealed pdf files. A final construction estimate including betterment costs shall be included in the submittal. A full size set of plans shall also be submitted to the utility owner(s).

10.3.4 UTILITY PLANS SUBMITTED TO LOCATION & DESIGN DIVISION

The State Hydraulics and Utilities Engineer or designee shall review the 100% complete plans to determine the following:

a. All conflicts have been eliminated;

b. Utility plans base drawings agree with latest project plans;

c. The utility plans are complete and accurate; and,

d. Betterment, if any, has been accounted and the correct cost pro-rate established. (Prorate should be noted on the plans even if 100% project cost).

The utility plan sheets electronic files (DGN and PDF) are to be transmitted to the Central Office Location & Design Division and placed in Falcon with a request

that they be included in the project plans and the work performed by VDOT's contractor.

When plans are submitted the State Hydraulics and Utilities Engineer or designee shall insure all quantities are entered into the Transport estimating system. This shall include all standard and non-standard items as well as the breakdown for cost responsibility.

10.3.5 SUBMISSION DATE FOR CONTRACT UTILITY PLANS & ESTIMATES

The Regional Utilities Manager will advise the State Hydraulics and Utilities Engineer or designee and the utility design consultant of the date all plans and estimates are to be submitted. This date will be predicated on the project advertisement date. Normally, this date will be no later than the date established by the Tier 1 and Tier 2 submission dates. Preliminary final plans, special provisions and quantities are to be submitted for inclusion in the Pre-Advertisement Conference (PAC) review plan assembly. This is normally six months prior to the project advertisement date.

10.3.6 REVISING UTILITY RELOCATION PLANS

After the utility relocation plans have been reviewed and accepted by VDOT and it becomes necessary to update due to a revision of the project plans, the State Hydraulics and Utilities Engineer or designee shall determine whether the revision can be accomplished by VDOT staff, utility owner, or the consultant. If consultant services are necessary, he shall return them along with the latest project plans to the consultant and request a cost proposal to update the utility plans. Any revision of the utility plans shall be coordinated with the utility owner.

10.4 INCIDENTAL COST FOR WORK PERFORMED BY THE UTILITY OWNER

There are occasions when the utility owner desires to perform a portion of the utility work that is incidental to the overall relocation with its own forces. For example, the utility owner may elect to install valves in a water system that may facilitate the contractors operation, or relocate service lines to individual houses, or furnish certain material to the VDOT contractor, etc. The utility owner may also inspect the utility work included in the transportation project reporting through the VDOT Area Construction Engineer and upon completion of the utility work, confirm that the work was performed in accordance with the approved plans and specifications. VDOT may request the utility owner to accept a portion of the utility work whereby that portion of the utility can be placed in service to facilitate other parts of the construction project. The cost of this inspection and incidental work is reimbursable to the utility owner based upon the project prorate for the utility work.

10.4.1 INCIDENTAL COST ESTIMATE

When relocation work included in the VDOT contract is project cost, the utility owner is eligible to recover the incidental costs incurred in connection with the relocation. These incidental costs may include but are not limited to the following:

a. Engineering cost (design of plans, etc.);

b. Right of Way (easements etc.);

c. Materials furnished to the VDOT contractor;

d. Equipment utilized;

e. Field crews (operating valves, etc); and,

f. Inspection of the utility relocation work.

An estimate of incidental cost shall be furnished to the Regional Utilities Manager or designee by the utility owner at the 90% review stage. This estimate will normally be made a part of the utility agreement. (See Appendix 18 for example letter from the utility owner submitting incidental cost estimate). Financial overhead rates used by utility owners for incidental work cannot be arbitrary and shall be substantiated by the utility owner's records and may be subject to a pre-award audit. The billing procedures are included in Section 13.3.

10.5 UTILITY WORK AT UTILITY OWNER'S COST

When any part of the cost of the utility work is to be borne by the utility owner, the utility owner shall submit a statement agreeing to bear this cost to the Regional Utilities Manager or designee. This statement shall be sent as soon as possible and no later than the date final utility plans are transmitted to VDOT. The following statement is satisfactory for this purpose.

> "The (Utility Owner) agrees to bear the cost of the utility work included in the Virginia Department of Transportation (VDOT) contract which has been determined to be (Utility Owner's) responsibility, and will reimburse VDOT these cost based on the unit prices bid in the transportation contract awarded by VDOT, plus a 10% construction engineering and administration cost, which may be expressed as a percentage of the total."

Language similar to the above will be included in the utility agreement. However, in the event the agreement is not fully executed before the transportation project is advertised, the above statement will provide VDOT with the assurance that is needed to preclude complications after project advertisement.

10.6 UTILITY AGREEMENTS FOR IN PLAN WORK

All utility work that is included in and made a part of the transportation project shall be placed under a formal agreement. This agreement is initiated by the State Utilities and Property Manager. It cannot be covered under the "Master Agreement".

The various types of formal agreements that provide for the relocation of utilities to be included in VDOT's contract are found in RUMS

10.6.1 TRI-PARTY AGREEMENTS

When the utility work is on a project where the right of way is not owned nor maintained by VDOT, the utility agreement must include the owner of the right of way, the utility owner and VDOT. This type of agreement is used on an Urban Project when the utility owner is not the City/Town that controls the right of way.

10.6.2 TWO-PARTY AGREEMENTS - VDOT RIGHT OF WAY

On the projects where VDOT owns and maintains the right of way, a two-party utility agreement shall be used. The utility owner and VDOT will be the two parties of the agreement.

10.6.3 TWO-PARTY AGREEMENTS - MUNICIPALITY RIGHT OF WAY

Urban projects wherein the utility owner and the municipality are the same, a two-party utility agreement between the municipality and state shall be used. (See Appendix 28)

10.6.4 PREPARATION AND CIRCULATION OF UTILITY AGREEMENTS

The State Utilities and Property Manager’s staff, normally the Regional Utilities Manager or designee, will prepare utility agreements for the relocation or installation of utility facilities performed by VDOT's contractor. When the utility

agreement is a three-party agreement, three unexecuted agreements are to be sent to the utility owner. The letter of transmittal will request the utility owner to execute all three copies of the agreement and forward them to the City for their execution. The City, upon their execution, will be requested to return all three copies of the agreement to VDOT for execution by the State.

After the utility agreement has been executed by the State Right of Way and Utilities Director, a fully executed agreement will be sent to each party involved by the State Utilities and Property Manager.

Utilities relocated or installed onto right of way owned and maintained by VDOT will be covered under a two-party agreement. The agreement will be sent directly to the utility owner for execution with the request that it be returned to VDOT, as directed, for execution by the State.

10.6.5 COST PRORATE METHOD

The percentage of cost to be borne by each party is to be included in the utility agreement. This percentage of cost is to be determined by the Cost Analysis Method (Section 3.3.1).

10.7 ENVIRONMENTAL PERMITS

The State Hydraulics and Utilities Engineer or designee will advise the Environmental Division of any utility work that has been made a part of the VDOT project contract that may require an environmental permit. Advanced plans, sketches, etc. will be furnished to the Environmental Division with a request that the utility work be included in VDOT's permit application.

When betterment utility work is constructed outside of the project area, the utility owner shall apply for and secure the necessary environmental permits for the construction of the utility facilities. (Section 7.7 provides instructions for environmental permits).

10.8 PLAN REVIEW BY STATE REGULATORY AGENCIES

The state regulatory agencies that review water and sanitary sewer plans have approved VDOT's specifications and standard drawings covering water and sanitary sewer facilities. These approved specifications and standard drawings are included in VDOT's Road and Bridge Specifications and VDOT's Road and Bridge Standards.

With this approval, it will not be necessary for them to review and approve normal water and sanitary sewer relocations that are made a part of VDOT's contract. However, the agencies have stated that it will still be necessary that they review and approve all major items, such as water treatment plants, sanitary sewer treatment plants, sewerage pumping stations, and any other items which VDOT does not feel comfortable in approving.

10.9 EXPIRED SERVICE LIFE CREDIT

When the utility relocation, included in the VDOT contract at project cost, involves the replacement of a large operational unit, an expired service life credit is required from the utility owner. This credit is for that portion of the life of the item being replaced, which has been used by the utility owner (Section 8.12 and Appendix 25).

Normally, this credit is a lump sum payment to VDOT and is due and payable after the replacement unit is operational. The Utility Agreement under which the utility relocation is

being performed should have a section stating the amount of the expired service life credit and when it is to be paid.

The Expired Service Life Credit payment is to be sent to the State Utilities and Property Manager. The State Utilities and Property Manager will in turn forward the payment to the Fiscal Division and request that it be credited to the construction project.

10.10 ACCEPTANCE OF UTILITY WORK INCLUDED IN TRANSPORTATION CONTRACT

Upon completion of a relocated segment performed by VDOT's contractor, the utility owner shall confirm to VDOT, in writing, that the work included in the transportation contract was performed in a satisfactory and acceptable manner.

The date upon which each permanent utility line is placed in service and properly tested shall be considered the completion date for that facility. After a permanent length has been properly installed and tested, it shall be considered accepted by the utility owner. VDOT's contractor shall only be responsible for damages from other subsequent work and warranty work in accordance with the contract specifications.

CHAPTER 11

PROCESSING UTILITY OWNER'S RELOCATION PLANS AND ESTIMATES

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CHAPTER 11

PROCESSING UTILITY OWNER'S RELOCATION PLANS AND ESTIMATES

11.1 GENERAL

This chapter covers procedures for processing utility relocation plans and estimates (P&E) submitted by the utility owners to the Virginia Department of Transportation (VDOT) on transportation construction or maintenance projects. A Plan and Estimate Check List (Appendix 15) and a marked set of project prints with notes should be used to document the files regarding any questions and/or actions taken in the review of the P&E. There will be occasions where it will be necessary to refer back to the documentation for clarification of the utility relocation.

11.2 SUBMISSION OF UTILITY RELOCATION PLANS AND ESTIMATES

Upon completion, the utility owner shall submit the appropriate number of copies (See Section 8.14) of the P&E to the Regional Utilities Manager or designee. The Regional Utilities Manager or designee shall update the RUMS by entering the date the P & E was received and the estimated cost for both VDOT and the utility owner.

If approved Right of Way plans are unavailable or if Right of Way funding has not been authorized, the Regional Utilities Manager or designee shall advise the utility owner that VDOT is in receipt of the P&E; however, authorization for the utility owner to proceed with the work cannot be given at this time. If after three months, the Regional Utilities Manager or designee is still unable to authorize the utility owner to proceed with the work, progress billings for the project share of preliminary engineering costs incurred may be presented by the utility owner for payment. (See Section 12.11)

Along with the P&E, the utility owner shall submit the following:

a. A completed UT-9 (Section 6.4);

b. A narrative statement (Section 8.6);

c. A utility construction work schedule (Section 8.7);

d. Real Property Interest Documentation (Sections 2.4, 2.5 and 7.3.4);

e. Request to use contract forces (if appropriate) (Section 8.8); and,

f. Information to be included in VDOT's Special Provision regarding the utility owners facilities (Section 8.10)

g. Cost for adding Identification Tags to aerial facilities by owner/operators.

11.3 REVIEW OF PLAN AND ESTIMATE BY VDOT

Plans and estimates shall be submitted to the Regional Utilities Manager or designee on all transportation projects except those projects that are being handled by the VDOT No Plan Coordinator in the District Office. The District generated projects i.e. No-Plan, Budget Item, Safety Projects, etc., will normally be handled by the District No Plan Coordinator or their staff and those P&Es are to be sent directly to their office. (See Chapter 14.)

The review and approval of the P&Es shall be made using approved Right of Way Plans, unless approved Construction Plans are available. If during the review of the P&E, there is a question regarding a VDOT policy, procedure or application, the Regional Utilities Manager or designee shall request clarification from the State Utilities and Property Manager.

11.3.1 POTENTIAL CONFLICTS

The Regional Utilities Manager or designee shall review the utility relocation plans to assure that all utilities, which are in conflict, will be relocated and that the planned relocations have been coordinated with other necessary utility relocations.

11.3.2 CLEAR ZONE AND UTILITY ACCOMMODATION POLICY

The above ground utilities shall be reviewed to assure compliance with VDOT's "Clear-Zone" Guidelines (Appendix 31) when they are to be relocated onto the project's right of way. Utilities that will be relocated outside of the project's right of way do not come under the requirements of the "Clear Zone" Guidelines. Existing utilities, located within the highway right of way that are not in conformance with the "Clear Zone" Guidelines must be relocated to comply, or the project files documented as to why the utilities were not relocated to comply with the “Clear Zone” Guidelines. When utilities are located behind the guardrail, refer to Section 501 of VDOT’s Road and Bridge Standards as revised for distances between fixed objects and guardrail.

The vertical clearances for the aerial crossings of the roadway as well as entrances and other roadway features, i.e. bridges, walls, etc., shall be reviewed for compliance with the Land Use Permit Regulations (24 VAC 30-151).

Relocation plans for the underground utilities shall be reviewed for compliance with the Land Use Permit Regulations (24 VAC 30-151) and to assure that no conflicts with the proposed roadway features or other utilities will occur. Separation between proposed and other existing underground utilities shall be reviewed for compliance with health and safety regulations.

11.3.3 COST RESPONSIBILITY DETERMINATION

The utility owner, after completing its utility relocation plans shall complete Form UT-9 furnished by VDOT with the letter confirming the Utility Field Inspection. The column on the UT-9 titled "Units Used In Determining Cost Responsibility" shall be completed and agreed upon between VDOT and the utility owner. If the utility owner should have any questions regarding the UT-9, the Regional Utilities Manager or designee shall be contacted for clarification. This column when completed will indicate those utility facilities that are in conflict with the project construction that must be relocated.

The Regional Utilities Manager or designee shall compare the utility relocation plans with the completed UT-9 and confirm the cost responsibility prorates. Upon ascertaining that the UT-9 is accurate and reflects the proposed plan of adjustment, the Regional Utilities Manager or designee shall sign and date it in the appropriate blocks. If there is a discrepancy, the Regional Utilities Manager or designee shall resolve it prior to authorizing the utility owner to proceed with the adjustment.

The cost responsibility will be determined by the Number of Poles/Length of Facility Method (Section 3.2) for most relocations.

11.3.4 BETTERMENT

The P&E shall be reviewed by the Regional Utilities Manager or designee to ascertain if betterment has been included in the utility relocation (Section 8.11). When betterment is made a part of the P&E, a credit for betterment or the Cost Analysis Method (See Section 3.3.1) of prorating the utility relocation is required. Appendices 12 and 13 are tables that provide a standard size replacement for

electrical conductors and telephone cables. When the replacement cable/conductor falls within the acceptable replacement size no betterment is required.

11.3.5 NARRATIVE STATEMENT

The Narrative Statement (Section 8.6) shall be reviewed to assure that it is complete and accurate. If a discrepancy is found, it will not be necessary to return the complete P&E to the utility owner for correction. However, it will be necessary for the utility owner to provide a correct and/or more complete Narrative Statement.

11.3.6 UTILITY WORK SCHEDULE

A Utility Work Schedule (Section 8.7) is to be included in the P&E and should include time frames (number of days, etc.) to accomplish certain phases of the utility relocation work. All work schedules should be reviewed to assure that a coordinated effort by all the utility owners to clear the project construction area is being made.

The Regional Utilities Manager or designee may find it necessary to conduct a coordination meeting with the utility owners. This meeting is for the purpose of establishing work schedules that will coordinate the work of all of the utility owners and will allow them to proceed and complete their relocations as quickly as possible.

11.3.7 EXPIRED SERVICE LIFE CREDIT

When a major utility operational item such as a sewage pumping station, water treatment plant, electrical substation, etc. is being relocated and includes any reimbursement at VDOT's cost, an Expired Service Life Credit shall be provided

in the estimate (Section 8.12). This is a credit for that portion of life of the unit that has already been used by the utility owner. This credit is to be reflected in the utility owner's final bill.

11.3.8 PRE-AWARD AUDIT

The External Audit Section of the Fiscal Division maintains pre-award audit data on most major utility owners; however, a plan and estimate from a utility owner that infrequently relocates its facilities on VDOT projects should be sent to the External Audit Section for a pre-award audit. Any time there are questions on the estimate regarding overhead rates, material handling cost, engineering cost, etc., the External Audit Section should be requested to review the matter to assure all cost are proper. Questions such as betterment, cost pro-rate, and other items not pertaining to accounting procedures of the utility owner should be referred to the State Utilities and Property Manager for resolution.

11.3.9 SPECIAL PROVISION INFORMATION

All utility owners having facilities that will not be relocated prior to project advertisement or otherwise be impacted by the project construction shall provide the Regional Utilities Manager or designee with information to formulate a Utility Special Provision (Section 8.10). This information shall include the number of days necessary for the utility to complete its relocation. If this situation should arise the Regional Utility Manager may require the utility to complete its relocation in phases to minimize the impact on the roadway contractor. This also includes utility owners that are relocating their facilities at no cost to VDOT.

11.4 AUTHORIZATION TO BEGIN UTILITY RELOCATION WORK

Upon satisfactory completing the review of the utility owner's plan and estimate and receipt of approved Right of Way plans and funding, the Regional Utilities Manager or designee may authorize the utility owner to proceed with the relocation of their utility facilities. The authorization letter for the use of company or contract forces can be found in RUMS. This authorization can be made under the following conditions.

a. The utility owner has executed a Master Agreement and the transportation project is on a VDOT maintained road; or

b. The utility owner has not executed a Master Agreement, and the estimated project cost is less than $25,000, and the transportation project is on a VDOT maintained road.

See Appendix 26 for a list of utility owners having signed the master utility agreement.

On transportation projects where the road is owned and maintained by VDOT, and the project cost of the utility relocation is estimated to be more than $25,000 and the utility owner has not executed a Master Agreement, the plan and estimate must be placed under a formal agreement. It is the responsibility of the Regional Utilities Manager or designee to prepare the agreement, found in RUMS, and send it to the utility owner to be executed. Upon receipt of the executed agreement from the utility owner, it is to be executed by the Director of Right of Way and Utilities on behalf of VDOT.

Plans and estimates on urban projects and other projects where the right of way is not controlled by VDOT must be placed under a three-party formal agreement (Appendix 27). If the State is participating in the cost of the transportation project, it must be a party to the agreement, even though VDOT does not control the road right of way. It is the

responsibility of the Regional Utilities Manager or designee to prepare the agreement, which is found in the RUMS library. The agreement is to be circulated to the municipality and utility owner, in that order, to be executed. Upon receipt of executed agreement from the municipality and utility owner, it is to be executed by the Director of Right of Way and Utilities on behalf of VDOT.

The section of the agreement that covers keeping records and accumulating actual and related indirect costs requires that the name of the REGULATOR for the type utility involved be added when the agreement is prepared. For this purpose the following are to be used as appropriate.

Gas and Power Facilities - Federal Energy Regulatory Commission and/or State Corporation Commission.

Telephone and Communication Facilities - Federal Communication Commission

All others - Accounting procedures currently in use

The fully executed agreements are to be returned to the respective entity when the relocation work is authorized. VDOT's copy is to be retained in the Regional Utilities Manager's or designee's project file.

11.4.1 CONDITIONS AND EXCEPTIONS OF THE AUTHORIZATION

There are occasions when conditions must be included in the authorization letter to the utility owner. These conditions and/or exceptions are to be concise and direct to the point.

11.4.2 RIGHT OF WAY/EASEMENT AVAILABILITY

Prior to authorizing the utility owner to proceed with the relocation of their utility facilities, the Regional Utilities Manager or designee is to review the right of way

status. If the right of way is not sufficiently clear, the utility owner will be advised accordingly and informed that notification of clear right of way will be given when it is available. An estimated completion date for right of way acquisition is to be given. The letter of authorization is to request the utility owner to proceed with ordering material so that the relocation work can proceed when right of way is available.

11.4.3 ADVANCED AUTHORIZATION

At times, in order not to delay the construction project, it may be necessary to issue an advanced authorization to proceed with the utility relocation work prior to approval of the plan and estimate. Advanced authorization is sometimes needed to secure materials that have a lengthy procurement time, such as electrical transmission towers. This advanced authorization is to be given with the condition that an acceptable plan and estimate must be provided.

11.4.4 LETTER OF AUTHORIZATION

In most instances, the letters contained in RUMS will be used to authorize the utility owner to proceed with their relocation work.

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CHAPTER 12

UTILITY RELOCATION CONSTRUCTION

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CHAPTER 12

UTILITY RELOCATION CONSTRUCTION

12.1 GENERAL

This phase occurs after the utility owners have been authorized to proceed with the utility relocation work. Utility relocation should be completed prior to the beginning of highway construction, except as provided for in special provision or sequence of construction.

The Regional Utility Manager or designee has the responsibility for monitoring the status of right of way and replacement utility easement acquisitions, and to keep the utility owners informed when areas within the project are clear and sufficient to permit the utility owner to begin relocation work.

Progress of the relocation work is to be monitored and coordinated between the utility owners to avoid delays in the completion of utility relocation. Monitoring and coordination is essential to assure that relocation work is completed in a timely manner to eliminate or minimize interference with VDOT's project construction schedule.

12.2 NOTICE OF RIGHT OF WAY STATUS

The status of right of way and utility easement acquisition is to be monitored by the Regional Utility Manager or designee. The Utility Easement Status Log Sheet, included in RUMS should be used for this purpose. A notice must be given to the utility owners providing a date when negotiations are anticipated to begin and end. The utility owners are expected to use this information to schedule the relocation work.

The Regional Utility Manager or designee should coordinate the utility easement requirements with the Regional Right of Way Manager and establish a priority for the

acquisition of those parcels where utility easements and right of way clearance is needed for utility relocation to proceed.

When it is determined that right of way negotiations are complete within an area of the project that will provide clearance whereby the utility owners can begin a segment of relocation, the Regional Utility Manager or designee shall notify the utility owners accordingly.

12.3 SCHEDULING COORDINATION

The Regional Utility Manager or designee will confirm project advertisement schedules during this phase and provide the utility owners with scheduled dates for project showing, award of the transportation contract, and the anticipated beginning date of project construction. If available, the date the contractor is given a notice to proceed with construction should also be provided.

The work schedule prepared by the utility owners in conjunction with the plan and estimate, and subsequently authorized by VDOT, is made a part of the overall highway project scheduling. Utility special provisions, sequence of construction, and project advertisements are developed from information provided with the work schedules.

Utility Work Schedule is shown in Appendix 11 and referenced in section 8.7.

The utility owner is expected to carry out the relocation work to conform closely to the time frames included in the work schedule and/or special provisions. Coordination required to complete various phases of the relocation between utility owners involved in the project must be taken into consideration and the relocation must be scheduled to achieve an orderly and expeditious transition.

Progress of the relocation work during this phase must be monitored by the Regional Utility Manager or designee to assure that the work is on schedule. When the work is

not proceeding on schedule, meetings should be arranged between VDOT and the utility owners in an effort to coordinate the completion of work within a time frame to meet VDOT's project construction schedules.

12.4 ROLES – CENTRAL AND DISTRICT OFFICES

Upon receipt of notification from the utility owners that relocation construction will begin, a Utility Inspector should be assigned to verify the construction and location of all utilities to be relocated prior to the advertisement of a project. The Utility Inspector will work with the Regional Utilities Manager or designee to determine the inspection needs on each project.

The District inspection responsibilities, in addition to those covered in Section 12.5, will include monitoring and reporting the following situations:

a. The progress of the relocation. Reports should be forwarded to the Regional Utilities Manager or designee when the utility owners fail to make progress or it is determined that a coordinated effort by other utility owners is needed.

b. The actual relocation work should be compared closely with the approved utility relocation plan and estimate and the approved transportation project plans to assure that installations and relocations are performed sufficiently to clear and conform to project features of the transportation project. Reports should be forwarded to the Regional Utilities Manager or designee when changes are made in the method of relocation or it is

c. Determined that the proposal for relocation does not conform to the VDOT project.

If the Utility Inspector is unable to resolve issues the Regional Utilities Manager or designee must be notified.

It is the Regional Utilities Manager's or designee's responsibility to initiate communications with utility owners in an effort to resolve any outstanding issues. When the issues cannot be resolved on the district level, the State Utilities and Property Manager should be notified. The State Utilities and Property Manager should provide whatever assistance is needed to resolve such issues.

In all cases, the files should be documented to include facts leading up to and through the resolution of each situation.

12.5 INSPECTION AND RECORD KEEPING FOR UTILITY RELOCATION WORK

It is imperative that inspection and record keeping be performed for all utility relocations. The inspection must be performed in accordance with the established procedure as covered in this chapter.

Field verification must be made for all relocation work being performed. The inspection records are required to verify location, materials, billings for the labor, material, and major items of equipment used by the utility owner to perform the relocation work.

Each VDOT District will assign a Utility Inspector to verify the construction and location of all utilities to be relocated prior to the advertisement of a VDOT project. Each VDOT District has the responsibility to provide inspection of utility relocation work during the following phases of a transportation project:

a. Relocation work being performed by the utility owners prior to, or during project construction; and,

b. Relocation work included in the transportation project contract to be performed by VDOT's project contractor.

The assigned Utility Inspector is responsible to review the relocated facilities for compliance with the approved plan and estimate or plan and project requirements.

12.5.1 NOTIFICATION BY UTILITY OWNER BEFORE BEGINNING RELOCATION WORK

VDOT's letter of authorization will contain conditions that the utility owner must comply with prior to beginning the relocation work. Generally, the conditions include a requirement that the utility owner notify VDOT prior to beginning certain phases of work as covered below:

a. Notify the District Environmental Manager prior to performing any tree trimming within VDOT's proposed right of way; and,

b. Notify the Regional Utilities Manager or designee in writing prior to proceeding with any phase of the utility construction.

The notification must be in writing, or if the notification resulted from a conversation, a letter confirming the conversation will suffice.

The utility owner should initiate procedures within their company to assure that the Utility Inspector, and when appropriate the District Environmental Manager, is notified of the date relocation work is expected to begin on all transportation projects.

12.5.2 INSPECTION PROCEDURES FOR UTILITY RELOCATION WORK

Each VDOT District should assign a Utility Inspector to inspect the utility relocation work who shall perform the following procedures when applicable:

a. Obtain a copy of the approved relocation plans, estimate, authorization letter or VDOT prepared relocation plan, agreement and any Permits required. The inspector must become familiar with the relocation proposed by the utility owner.

b. Utility Inspector to provide begin and end dates.

c. Keep daily records on form UT-7 and 7a, 7b, as applicable. (Appendix 20).

(1) List major items of material installed.

(2) List major items of material removed. Indicate condition of materials removed.

(3) Keep record of dates utility owner's personnel working on the project, showing classification of employees and hours worked.

(4) Keep record of utility owner's equipment used on the project, showing date, type of equipment, and hours used.

(5) Record the name of utility contractors and the type of work performed. Similar record of personnel and equipment should be kept as required for work performed by the utility owner.

(6) Remarks space is to be used to provide a narrative description of work performed by the utility owner or its contractor. Unusual conditions impacting the cost of the project should be indicated.

d. See that the utility owner or their contractors protect survey stakes.

e. See that the contractor disposes of brush and restores areas to an acceptable degree. (See Section 8.15 Tree Trimming and Stump Removal.)

f. When the relocation construction is complete, the Utility Inspector shall summarize daily records and send a copy of the summary to the Regional Utilities Manager or designee.

g. Obtain approval from the Regional Utilities Manager or designee for major changes made by the utility owner and document minor changes. See Section 12.10 Changes in Approved Relocation Work.

h. The inspector shall create a set of red-lined “as-built” plans that depicts any changes made from the approved Plan & Estimate plans.

i. The Utility Inspector should become familiar with utility special provisions, when applicable.

12.5.3 OPTIONAL PROCEDURES FOR INSPECTION OF UTILITY RELOCATION CONSTRUCTION

The optional procedure, if approved by the Regional Utility Manager, allows the assigned utility inspector to make a periodic or phase inspection of the utility relocation work in lieu of keeping daily records. The use of the optional procedure requires that the duties outlined in items a., b., d., e., and g. covered in Section 12.5.2, be followed.

The Utility Inspector shall prepare a record on Form UT-7 for each visit made to the job site, documenting what was occurring at that time. Appropriate notes shall be made under remarks providing a description of work being performed on the project by each utility owner. If there is no activity occurring on the

project a Form UT-7 record should be prepared for that given day to note that relocation work is not being performed.

Upon completion of the relocation work the Utility Inspector shall complete the UT-7's, As-builts, GPS coordinates of relocated facilities if available and provide a cover letter with appropriate statement similar to one of the following:

a. When relocation is completed in accordance with the method as provided by the approved plan and estimate, the following statement will suffice:

   "The utility relocation work was performed by (Name Of Utility Owner) in accordance with the plan and estimate approved (Date Of Authorization)"

b. When a change was made in the method of relocation, a modified statement and as built plans are required.

   "The utility relocation work was performed by (Name Of Utility Owner) in accordance with the plan and estimate approved (Date Of Authorization) except as shown on the attached as built plans."

In either type of inspection, it is to the advantage of both VDOT and the utility owner to compare and reconcile daily records of the relocation work, to investigate ways to coordinate work to better utilize time and funds, and mutually pursue the successful completion of the relocation.

The UT-7's and as-built plans are to be submitted to the Regional Utilities Manager or designee where they will be retained until the utility owner's final invoice is received.

Section 12.4 contains further roles of Central and District offices regarding utility relocation inspection.

12.5.4 UTILITY WORK INCLUDED IN VDOT'S CONTRACT

When utility relocation work is included in the transportation plans to be performed by project contractor, the inspection will be performed by the construction project inspector along with the other contract items and records kept accordingly.

The utility owner may provide an inspector to assure that the work is performed in accordance with the plans, specifications and special provisions. The utility owner's inspector must work through VDOT's project inspector for the purpose of resolving issues involving the utility relocation work. The utility owner will be invited to the project pre-construction meeting to gain an understanding of the contractor's project schedule and timeframe for inspection by the utility owner's staff.

Upon completion of the relocation performed by VDOT's contractor, the utility owner should confirm to VDOT, in writing, that the work included in the transportation contract was performed in a satisfactory and acceptable manner.

12.5.5 NOTIFICATION OF COMPLETION OF UTILITY RELOCATION BY THE UTILITY OWNER

Upon completion of the relocation work, the utility owner must notify the Regional Utilities Manager or designee in writing. This will allow for a final inspection of the relocation to assure compliance with the approved relocation plan and estimate.

12.5.6 INSPECTION AND DISPOSAL OF SALVAGE MATERIAL

Materials recovered by the utility owner from the existing facility which are accepted for return to stock, shall be credited to the project at the current stock prices of such used materials.

Materials recovered and not accepted for reuse by the utility owner, if determined to have a net sale value, shall be sold to the highest bidder by the utility owner with the appropriate credit being given to the transportation project. The credit is to be allowed in the final bill.

If the utility owner practices a system of periodic disposal by sale, credit to the project shall be at the going prices supported by records of the utility.

12.6 COORDINATION BETWEEN COMPANIES

Coordination is required between all utility owners especially where joint use work is proposed. The responsible utility owner should consider the joint use work as well as construction activities of each utility relocating their facilities on the transportation project when scheduling their construction activities. Each phase of the relocation work, such as tree trimming or removal, pole installation, and joint use trenching, should be scheduled to allow all utility owners to proceed and complete their work in a timely manner.

Progress of relocation work may be affected by insufficient right of way and easement clearance. When appropriate, sections of the project are to be identified by the Regional Utilities Manager or designee where right of way clearance will permit the utility owner to begin work in a segmented fashion. The responsible utility owner in conjunction should initiate coordination with the Regional Utilities Manager or designee.

12.7 TRANSPORTATION PROJECT SHOWING

After advertisement of the transportation project for construction, and prior to receiving bids from prospective contractors, a project showing may be scheduled by VDOT.

The Regional Utilities Manager or designee should request the attendance of the utility owners and utility inspector at this meeting when the utility work is incomplete and coordination of the utility work is required with the project.

The utility owner is expected to discuss the involvement of their utility facilities with the project construction, and the time frame for completing relocation work. The utility owners should be prepared to discuss other issues related to their utility facilities within the project limits as well.

The terms of Underground Damage Prevention Act requires representative(s) from the affected utility companies to attend this meeting.

12.8 PROJECT PRECONSTRUCTION CONFERENCE

The District Construction Engineer will schedule a preconstruction conference, after the bid award, with the project contractor prior to starting the transportation project construction. The Regional Utilities Manager or designee will invite the utility owners involved with in-plan work in the project to attend.

The out of plan utility relocation work will have been completed prior to the award of the highway contract unless otherwise stated in a Special Provision.

When relocation work is included in the project contract, the utility owner should be prepared to address questions that may arise regarding the existing or proposed facilities. The utility owner should also be prepared to offer comments as appropriate pertaining to the involvement of their facilities.

The Regional Utilities Manager or designee should attend the preconstruction conference, and be prepared to give a report regarding the utility involvement with the project. Some of the issues to be addressed include the following:

a. Provide the name of each utility owner involved in the project, including their representative, address, and telephone number;

b. Review the sequence of construction relative to the utility relocation involved within the project;

c. Review the utility special provision;

d. Identify buildings that will require demolition to accommodate the completion of utility relocation;

e. Identify relocation work that will coincide with the highway construction activities;

f. Identify locations within the project where special work will be required by the highway contractor to provide protection to the utility facilities;

g. Provide a schedule for completion of the utility relocation work required by utility owners; and,

h. Review plan notes for the in-plan work.

The utility owner will be expected to indicate the type and location of existing facilities within the highway project. The utility owner should also explain proposed relocations and new work within the project and include a schedule for completing the work.

When utility involvement with transportation construction is extensive or complicated, progress meetings should be scheduled by the Regional Utilities Manager or designee to improve coordination and communication among the parties involved in an attempt to avoid delays and interference to the transportation project.

Under the terms of the Underground Damage Prevention Act, affected utility representatives are required to attend this meeting.

12.9 UTILITY READJUSTMENTS

There will be situations where utility facilities have been relocated, and due to subsequent plan changes in the transportation project, a readjustment or a second relocation of that facility will be necessary.

12.9.1 REQUIREMENTS FOR READJUSTMENT REIMBURSEMENT

Reimbursement for readjustments will be considered upon receipt of adequate information from the utility owner. The utility owner must submit a request for reimbursement to the Regional Utilities Manager or designee. The following guidelines have been established to facilitate payment for readjustments:

a. The utility owner must submit a plan and estimate of cost. The plan must include the original design and the proposed design. A narrative description must be provided so the reviewer will easily understand the readjustment.

b. Reasons or causes for the readjustment must be explained. Such reasons or causes may include a specific transportation project plan revision or a change in the scope of work.

c. Indicate the chain of events leading up to the readjustment, such as the date of a specific plan revision, the date when it was received by the utility owner, and the description of change in the scope of the transportation project requiring the readjustment.

d. Provide the date of original authorization to proceed and the completion date of the original relocation.

e. The readjustment must not be attributed to utility owner's or its contractor's error; and,

f. The readjustment must not be attributed to transportation project contractor negligence or be for the convenience of the transportation project contractor.

The Regional Utilities Manager or designee will need to notify the PMO Section (Project Manager) or L&D (Project Designer) if the project cost is increased above the original authorized estimate.

When it has been determined that reimbursement for readjustment is justified, the Regional Utilities Manager or designee will write an authorization letter.

A lump sum or force account method may be used for billing purposes depending on the arrangement between VDOT and the utility owner for the specific relocation.

The cost of readjustments, when approved, shall be 100% project cost, regardless of the original cost responsibility determination.

Readjustment costs exceeding $100,000 require the approval of the State Utilities and Property Manager. The readjustment plan and estimate, along with other supporting data, must be submitted to the State Utilities and Property Manager with a specific recommendation regarding approval.

12.9.2 UTILITY READJUSTMENT REQUIRED ON AN EMERGENCY BASIS

Emergency readjustment resulting from situations, such as a slide in the roadway embankment, may be necessary. When time does not permit the advance preparation of plans and cost estimates and subsequent approval, it

may become necessary for the utility owner to proceed with the readjustment. In this situation, the Regional Utilities Manager or designee must document the circumstances and provide details of the readjustment in writing to the utility owner setting forth the following information.

a. Reason for the readjustment;

b. Type utility involved;

c. Note that the facility involved was installed under the original relocation plan and estimate indicating the date of original authorization;

d. Identify the approximate materials required to accomplish the readjustment, such as number of poles or linear feet of the utility involved;

e. Include the approximate cost for the readjustment. This cost should be furnished by the utility owner; and,

f. Request the utility owner to submit a plan and estimate as required in Section 12.9.1 for consideration and approval prior to submitting a final bill for payment.

The readjustment cost responsibility arrangement and requirements as covered in Section 12.9.1 shall apply to readjustments made on an emergency basis.

12.10 CHANGES IN APPROVED RELOCATION WORK

Changes or alterations beyond the scope of the approved plan and estimate should be identified and approval can only be authorized by the Regional Utilities Manager prior to performance of the work involving change. Changes should be made only for the

satisfactory completion of the required utility relocation, and not for the convenience of the utility owner or the project contractor.

It is the responsibility of the utility owner to notify the Regional Utilities Manager or designee of needed changes on the project that are beyond the scope of the approved plan of relocation.

12.10.1 MINOR CHANGES

Where the need for minor changes arises in the utility relocation, the VDOT Inspector and the utility owner representative should provide adequate documentation in their daily records to indicate the nature of the change, reasons for it, and the final action. Minor changes include such things as adding a pole, making more convenient beginning or terminal connections to a facility, adding anchor guys, and slight changes in the location of the relocated facilities. When the issue arises regarding the character of the change as being minor or major, the Regional Utilities Manager or their designee shall be contacted for a decision. A determination shall be made if the change will affect the project construction activities.

12.10.2 MAJOR CHANGES

Approval from the Regional Utilities Manager for a major change is required prior to performance of the relocation. The utility owner must submit a written request, complete with plans showing the changes, list of materials increased and/or decreased a written explanation, and justification for the change. When the change results in an increase or decrease in cost, an estimated amount is to be given. The cost change will be reflected in the final bill. It will be necessary that the utility owner prepare a revised cost estimate to accompany the revised plans when the changes are extensive.

Major changes occur when the intent of the relocation deviates from the approved method of adjustment. Examples of such changes are construction of an underground facility instead of an aerial facility, location change from one side the road to the other, additional crossings, extensive shift in highway crossings, changing size of materials that may require betterment credit, and addition of major appurtenances to the utility facility.

12.11 PROGRESS BILLINGS

The utility owner may request partial payment for completed relocation work after formal authorization to proceed has been given by VDOT. The cost for materials stockpiled at the project site, or specifically purchased and delivered to the utility owner for use on the project, may also be reimbursed on progress billings following authorization.

The following guidelines have been established for the utility owner to request partial payment.

a. Progress billing shall be a minimum of $1000;

b. Progress billings shall not exceed 90% of the approved estimated project cost;

c. Progress billings must provide a separate cost for the various categories of cost incurred, such as materials, equipment, company and contract labor; and,

d. Progress bill must be prorated in accordance with the approved project estimate.

Appendix 21 includes information to be included in progress billings from utility owners.

When the actual cost exceeds the estimate, the utility owner may submit a revised estimate to the Regional Utilities Manager or designee for approval. If the Regional Utilities Manager or designee gives approval, the utility owner may submit progress billings not to exceed 90% of the revised estimate amount.

For the timely processing of billing invoices, each one must include the following information:

a. Date invoice was prepared;

b. Progress billing number must be included on invoice. The initial invoice will be Progress Billing Number 1;

c. Transportation project number. The project number under which the relocation was authorized is to be used;

d. Utility owner work order reference;

e. Total amount billed to date;

f. Previous progress billing payment amount;

g. Net amount due this invoice; and,

h. Date earliest and latest expense incurred.

The utility owner must send three copies of progress billing invoices to the Regional Utilities Manager or designee or as directed.

The payment due date is established by VDOT according to the procedures contained in Section 13.3.1.

Progress billings will not be accepted for relocation cost authorized on the lump sum basis unless specifically agreed upon with VDOT. Invoices for lump sum authorizations are to be submitted after completion of the approved work.

Due to unusual situations the utility owner may request payment for partially completed work. The Regional Utilities Manager or designee must determine the percentage of work completed in order to substantiate the percentage of work included in the progress billing prior to submitting for payment.

The utility owner shall submit a final invoice within 1 year after completion of their facilities relocations. Subsequent relocations occurring during project construction shall be treated as a supplemental relocation and billings separated from the initial relocation. A supplemental relocation does not warrant an additional time extension for a final billing for the initial utility relocation of a utility owner.

It should be determined by the Regional Utilities Manager or designee that the project is open to accept charges or credits. When a project is not open the following procedure must be followed to have the project opened. The Fiscal Division will send an e-mail to the Regional Utilities Manager or designee to have the project opened. The Regional Utilities Manager or designee will notify the PMO Section (Project Manager) or L&D (Project Designer) requesting that the project be opened to accept charges or credits.

12.11.1 PROGRESS BILLING ASSEMBLY TRANSMITTAL TO FISCAL DIVISION

The Regional Utilities Manager or designee must include the following information when submitting the invoice assembly to the Central Office Fiscal Division:

a. Transmittal memorandum to Central Office Fiscal Division

b. Accounts Payable Document Transmittal, form FD-AP-01;

c. Copy of the utility owner's invoice;

d. A Progress Bill Check List (Appendix 23);

e. The billing must be coded properly;

f. Distribution of the billing assembly is to be made as follows:

(1) State Utilities and Property Manager

(2) Regional Utilities Manager or designee; and,

A complete copy of the billing assembly must be retained in the originating office with the project files.

12.11.2 PROGRESS BILLINGS FROM CONSULTANTS

Progress billings may be accepted from consultants in accordance with the terms included in the basis of payment section of the consultant agreement.

The procedures for consultant progress billings must be in accordance with the requirements outlined in section 13.3.4.

CHAPTER 13

POST-UTILITY CONSTRUCTION

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CHAPTER 13

POST UTILITY CONSTRUCTION

13.1 GENERAL

Once the utility relocation is complete, the utility owner is required to submit the final invoice to the Regional Utilities Manager or designee as soon as possible but no later than one year after completion of the utility owner's facility relocations for the project. VDOT will not be responsible for payment of any billings received more than one year after completion of the utility owner's facility relocations unless previously agreed upon by the State Utilities and Property Manager. Upon receipt of the final billing, VDOT will begin immediately processing the bill for payment. The established procedures normally result in payment to the utility owner within 30 days of receipt of an acceptable invoice.

13.2 PERMITS

When relocation is being performed on a non-VDOT controlled roadway within a Town or City, such as an urban funded project, a permit will not be required by VDOT. The utility owner must meet the requirements of the Town or City for obtaining permits or as provided in the franchise agreement between the utility owner and the Town or City.

The VDOT permit application must be submitted upon completion of relocation, but no later than the final bill submission. If there will be no billing submitted, the permit application is due within 90 days of completion of the relocation. The Permit must cover all facilities, "As-Built", installed within VDOT's right of way. The permit must be submitted in accordance with the requirements of the Land Use Permit Regulations (24 VAC 30-151).

The utility owner must submit the permit applications to the Regional Utilities Manager or designee; one copy will be retained and three copies forwarded to the District Land Use Development Section.

Section 8.3, covering Utility Accommodation Policy, provides additional information regarding permits for relocation work performed under agreement on transportation projects.

13.3 FINAL BILLINGS BY UTILITY OWNER

The relocation costs must be properly reported and recorded in the utility owner's accounts, in accordance with the approved method for developing such costs. The utility owner shall provide one final and complete billing of all costs incurred, or of the agreed to lump sum. The billing, to be prepared in the utility owner's billing format, may include all cost accumulated for the specific transportation project by means of an approved work order system, except when the work has been authorized on the lump sum basis.

The utility owner must submit four copies of the final billing to VDOT for requesting payment. The final billing should be submitted to the VDOT office that provided the authorization letter for the relocation work to be performed. The final billing shall be made no later than one year after completion of the utility owner's facility relocation for the project. Billings received more than one year after the utility company's relocation will not be honored for payment unless previously approved by the State Utilities and Property Manager.

The line items in the final billing should be categorized in the same order and format used for the preparation of the estimate that will allow comparison and prompt processing by VDOT. The suggested estimate format UT-11, Appendix 9, includes a

column, which is provided for the purpose of making a comparison of the estimated and the final cost for the various categories.

The following documentation must be included with the utility owner's final billing for prompt processing and payment.

a. Name and address of the utility owner;

b. Tax Identification Number or Social Security Number;

c. Transportation project number;

d. Utility company work order number;

e. Invoice should state that it is a Final Billing;

f. Amount previous progress billings and the amount due this invoice;

g. Starting and completion dates of the relocation work;

h. Location of records and the name of the utility official to be contacted regarding audit;

i. Certification. The Amount to be shown is VDOT's share of the total accumulative cost (not required on lump sum billings);

j. An explanation letter when the difference in total cost overruns or under runs the estimate by 10%, and the difference is greater than $10,000. This requirement also applies when the overall total cost is within the acceptable

range, but an individual category differs more than 10%, and the cost difference is greater than $10,000;

k. The cost must be substantiated by an itemized breakdown including a list of materials installed and removed;

l. Betterment credit. The betterment credit should be recalculated to reflect the actual quantities of material used in the relocation and the current cost; and,

m. Salvage credit. Documentation should be sufficient to show items of materials removed for which credit is given, or a statement to the effect that there are no salvageable materials.

n. Provide certification that materials used in the relocation construction conform to USDOT's MAP21 Buy America policy.

13.3.1 PAYMENT DUE DATES ESTABLISHED BY VDOT

In accordance with the prompt payment Statute (See Section 2.9.2.e.), the required payment due date is thirty calendar days after receipt of proper invoice. Calendar days include weekends and holidays.

Upon receipt of a relocation invoice, it is to be "date stamped" from which the payment due date is established. The final invoice assembly must be submitted to the Central Office Fiscal Division by the Regional Utilities Manager or designee within ten working days after receipt.

If the utility owners invoice does not include sufficient information, or is not acceptable for any reason, the originating office must identify the problem and

notify the utility owner in writing within fifteen days after receipt and request a corrected invoice.

The payment due date will not be established until the problem is resolved.

13.3.2 PROCESSING UTILITY RELOCATION FINAL BILLINGS BY VDOT

The Regional Utilities Manager or designee is required to verify the accuracy of the utility owners invoice and process it promptly. The invoice must be analyzed to determine if it meets all the requirements included in the FINAL BILL CHECK LIST, Appendix 24, and the exceptions and conditions included with the authorization letter.

Form UT-10 is to be used to show the comparison of the estimate with the final bill. The comparison shall include the cost of various categories such as Preliminary Engineering, Right of Way Acquisition, Temporary Construction, Permanent Construction, Materials Installed and Credits. The comparison shall also include the major components of materials installed and removed. The results of the analysis must satisfy all requirements before recommending payment.

Form UT-10 is also used to compare major components of materials installed and removed with the Utility Inspector's records. (Form UT-7 and 7a, 7b as applicable, Appendix 20)

The reasons for differences should be included in the overrun or underrun letter from the utility owner.

It should be determined that the project is open to accept charges or credits. When the project is not open an e-mail must be sent to the PMO Section (Project Manager) or L&D (Project Designer), requesting that the project be opened to accept charges or credits.

All billings should be submitted using the project number under which the work was authorized.

The guidelines for processing progress billings are found in section 12.11.

13.3.3 FINAL BILLING ASSEMBLY TRANSMITTAL TO FISCAL DIVISION

The originating office must include the following information when submitting the invoice assembly to the fiscal division:

a. Transmittal memorandum included in the RUMS;

b. FD-AP-01 accounting voucher;

c. Copy of the utility owner's invoice and letter, prepared by the utility, explaining overruns or under runs when required;

d. A Final Bill Check List (Appendix 24);

e. The billing must be coded properly;

f. Comparison statement Form UT-10;

g. Available inspection statement Form UT-7 and 7a,7b as applicable (Appendix 20);

h. Distribution of the billing assembly. Distribution is to be made as follows:

(1) Central Office Fiscal Division, Accounting

(2) State Utilities and Property Manager,

(3) Regional Utilities Manager or designee

A complete copy of the billing assembly must be retained in the originating office with the project files.

13.3.4 BILLINGS FROM CONSULTANTS

The consultant must submit two copies of the invoice along with supporting data for progress or final billings to the State Location and Design Engineer/State Hydraulics and Utilities Engineer. The invoice must include the appropriate information required for billings as covered in Sections 13.3 and 13.3.1. Invoices must be submitted in accordance with the terms included in the payment schedule of the consultant agreement.

Section 9.8.4 covers the payment schedule included in the on-call consultant proposal and Section 9.10 covers additional information regarding consultant billings.

13.3.5 UTILITY INVOICES WITH OVERPAYMENT

When the utility owner's final invoice results in a refund, an FD-AP-01 is not required. However, a complete assembly of the billing is required with other information as required by Sections 13.3, 13.3.1, 13.3.2 and 13.3.3.

The utility owner should make the refund check payable to the Treasurer, Commonwealth of Virginia.

13.3.6 ELECTRONIC PAYMENTS TO UTILITY OWNERS

Payments for relocation costs may be made electronically to selected vendors through the Financial Electronic Data Interchange (EDI) program.

The payments are electronically remitted directly to a specified bank account rather than mailing the checks to the recipient. The following information must be included on the billing so the recipient can identify the payment:

a. Customer Account Number;

b. Vendor Invoice Number; and,

c. Description of service covered by invoice. The description must not exceed 22 characters. Example: “Utility Relocation”.

13.4 SUBMISSION OF UTILITY INSPECTION REPORT

Inspection of relocation work is to be provided in accordance with the procedures outlined in Section 12.5.

The Utilities Inspector will submit form UT-7 and 7a, 7b as applicable summary and as built plans, to the Regional Utilities Manager or designee. The form UT-7 and 7a, 7b as applicable is to be used to verify the utility owner’s final bill and must be submitted with the final bill for payment.

13.5 AUDITS

The Fiscal Division may audit final billings. When a discrepancy occurs in a billing, the audit section will notify the State Utilities and Property Manager in writing. The State Utilities and Property Manager will review the report and if the discrepancy can be resolved, a written reply will be made to the audit section. If the State Utilities and

Property Manager is unable to resolve the issue, the audit report will be sent to the utility owner for corrections or comments. The State Utilities and Property Manager may provide a written recommendation to the audit section if the billing should be paid in full, or an exception made correcting the payment requested pending a reply from the utility owner.

13.6 ACCEPTANCE OF UTILITY WORK INCLUDED IN TRANSPORTATION CONTRACT

Upon completion of the relocation performed by VDOT's contractor, the utility owner should confirm to VDOT, in writing, that the work included in the transportation contract was performed in a satisfactory and acceptable manner.

13.7 RECORDS MANAGEMENT

The Regional Utilities Manager or designee shall maintain files to include documentation of the utility relocation work, such as correspondence, reports, plans and estimates, and agreements. The project file shall contain the following information:

a. UT-3 report or information included in RUMS

b. Bridge attachment request, when applicable;

c. Utility easement request, when applicable;

d. Request from utility owner to use VDOT consultants, when applicable;

e. Letter from utility owner requesting relocation work be included in VDOT plans to be performed by VDOT's project contractor;

f. Letter or agreement from utility owner agreeing to the prorate for in plan work, when applicable;

g. Signed agreement for in plan work, when applicable;

h. Form UT-9 or statement of responsibility;

i. Utility Owner's plan and estimate;

j. Plan and Estimate Checklist;

k. Real property interest documentation;

i. A form or memo reflecting plan and estimate review comments. The form or memo shall include the signature of reviewer and date of review;

m. Copy of request for FHWA approval, if applicable;

n. Copy of Federal Authorization, if applicable;

o. Copy of VDOT's Funding Authorization;

p. State Funding Authorization (in iPM)

q. Copy of Special Provisions, when applicable;

r. Letter authorizing the utility owner to proceed;

s. Copy of utility owner's billing (Progress and final);

t. Form UT-10 or some type billing/estimate comparison sheet;

u. Progress and Final Billing Checklist;

v. Non-betterment certification signed by the utility owner;

w. Copy of memorandum submitting billings to the Central Office Fiscal Division.

x. Summary of inspector's records on UT-7 and 7a,7b as applicable;

Information is also to be maintained in the RUMS system and updated by completing each appropriate field with current information. A checklist of the required items to be maintained in the files should be made a part of the project file for each utility relocation.

13.7.1 RECORD RETENTION BY VDOT

The records covering utility relocation work authorized by the Regional Utilities Manager or designee shall be maintained by the Regional Utilities Manager or designee and available for audit. These records shall be maintained in accordance with the current VDOT's record retention policy.

13.7.2 RECORD RETENTION BY THE UTILITY OWNER

During the progress of the utility relocation work and for a period of three years after the date final payment has been received by the utility owner, the records pertaining to the relocation and accounting will be available for inspection by VDOT, FHWA, or its representatives.

13.8 MONITORING OF REGION/DISTRICT OFFICE FILES/PROCEDURES BY THE STATE UTILITIES AND PROPERTY MANAGER

The State Utilities and Property Manager will monitor each Regional Utilities Manager's or designee's files at least annually for compliance with the relocation procedures. The monitoring will consist of a review of the Regional Utilities Manager's or designee's files and the procedures used to accomplish the relocation work.

A report shall be prepared by the State Utilities and Property Manager or designee, indicating the results of the monitoring and measures taken, if any, to correct any discrepancies found. A copy of the report will be sent to the Director of Right of Way and Utilities.

CHAPTER 14

NO PLAN, MINIMUM PLAN, DESIGN BUILD AND PUBLIC PRIVATE TRANSPORTATION ACT (PPTA) PROJECTS

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CHAPTER 14

NO PLAN, MINIMUM PLAN, DESIGN - BUILD and PPTA PROJECTS

14.1 GENERAL – NO PLAN and MINIMUM PLAN PROJECTS

The "No Plan" and "Minimum Plan" concept allows VDOT to advertise and award contracts for improvements that do not require complete detailed surveys and plans, and where the use of modified specifications are deemed appropriate by the District Administrator. Generally, the improvements will consist of widening, grading, draining, stabilizing, paving, and/or adding safety measures (Traffic signals, guard rail and etc.) on primary and secondary roads with relatively low traffic volumes by using engineering judgment.

This Chapter will point out the components that differ from the complete plan concept, and emphasize other requirements that are important to the process. The appropriate chapters in this manual are to be used as a guide for the various components or phases of the utility relocation process.

14.1.1 MINIMUM PLAN PROJECTS

The Regional Utilities Manager or designee is responsible for making arrangements for utility relocations required to accommodate construction on Minimum Plan projects. Arrangements for utility relocations on Minimum Plan Projects shall be made in accordance with the requirements for the Complete Plan Project as provided in this manual.

14.1.2 NO PLAN PROJECTS

The Location and Design Division, District No Plan Projects Section, or Residency is responsible for making arrangements for utility relocations required to accommodate construction on No Plan projects. Generally, the

procedures and instructions as outlined in this manual for utility relocation for projects under the complete plan concept, are also applicable to projects proposed under the no plan concept.

The procedures included in sections 14.2 through 14.11 of this chapter are applicable to utility relocations for No Plan projects.

14.2 PROJECT SCOPING

During the project scoping by the Location and Design Division, District No Plan Projects Section, or Residency, the name of each utility owner affected must be determined. The facilities located within the projects proposed right of way, including any required easement areas, shall be identified and the potential conflict of utilities with project construction determined.

A high degree of coordination with utilities is desirable during the planning for the transportation project in an effort to minimize the cost associated with utility relocation.

The Location and Design Division, District No Plan Projects Section, or Residency must determine the complexity of the utility involvement during this phase of the project and develop a time schedule that will allow the utility owners adequate time to engineer the project, acquire necessary easements and perform the relocation prior to award of the project contract.

14.3 UTILITY OWNERS

The names of the utility owners affected by the project should be entered into RUMS by the Location and Design Division, District No Plan Projects Section, or Residency.

14.4 PREPARATION FOR AND CONDUCTING THE UTILITY FIELD INSPECTION

The Location and Design Division, District No Plan Projects Section, or Residency shall identify all utility facilities within the project limits. An in-depth evaluation shall be made of the utility facilities, both aerial and underground.

14.4.1 PREPARATION FOR UTILITY FIELD INSPECTION

Simple sketches are to be prepared showing the utilities that are within project limits. Adequate notes are to be kept showing the following information:

a. Owner of each utility facility within project limits. When poles are joint-use, the riding utility owners must be identified;

b. Identify utility facilities in conflict;

c. Pole numbers or other identification such as stationing for underground utilities. On No Plan projects, an approximate location of utilities from beginning to the end of the project using a distance measuring instrument; and,

d. The cost responsibility determination shall be made for each utility facility within the project limits and shown on form UT-9, Appendix 4.

A “simple” sketch is to be used for preparation of the utility field inspection and to document the files.

14.4.2 CONDUCTING THE UTILITY FIELD INSPECTION

In order for the utility owners to have adequate information to engineer the proposed adjustment for the project, it is necessary for the Location and Design

Division, District No Plan Projects Section, or Residency to provide, as a minimum, the following information:

a. The proposed right of way and easements should be staked prior to the utility field inspection;

b. Information regarding depths of cuts and fills, entrances, clearance on ditches and pipes and other features of the project that may conflict with the aerial or underground utility facilities;

c. Point out all utilities within project limits and identifies those facilities in conflict with the project;

d. Provide a copy of the simple sketch;

e. Provide time schedules for advertisement and construction;

f. Provide names of landowners adjacent to the project; and,

g. Provide any coordination necessary to expedite the utility relocation to clear the project.

14.5 REPLACEMENT UTILITY EASEMENTS

Obtaining replacement utility easements needs to be addressed at an early stage in the transportation project development and coordinated with obtaining the right of way for the project. To assure that replacement utility easements are obtained, whereby the utility owners may proceed with the relocation without delay to the transportation project, the following procedures should be followed.

a. In many situations the existing utility facilities are located in, over, or across the property of the landowner granting right of way for the

transportation project. The landowner should be advised by VDOT that utility relocation would be required and discuss the clause in the omnibus deed covering the replacement easement. The landowners should be advised that they are agreeing to grant unto the utility owner, an easement over and across the lands lying adjacent to the lands conveyed for the transportation project. In this situation, the utility owner should be notified and requested to present the easement agreement to the landowner to be signed.

b. In some situations, the existing utility facilities will be relocated onto property of a different landowner, requiring a new easement. The easements may be obtained in the following manner.

(1) The utility owner should obtain the easement directly from the landowner; or,

(2) If requested and agreed to by VDOT the utility owner may furnish prepared utility easement forms and request that VDOT obtain the easements during the time that right of way is being acquired for the transportation project. See the VDOT Road Design Manual for additional criteria about purchasing right of way or easements.

Eminent Domain may become necessary when the landowner refuses to grant required right of way. When this occurs a Right of Way Phase must be established and a plan sheet must be developed for the parcels involved in accordance with the VDOT Road Design Manual and the procedures in Section 7.4, Utility Easement Requirements, should be followed.

14.6 UTILITY RELOCATION PLANS AND ESTIMATES

The Location and Design Division, District No Plan Projects Section, or Residency is responsible for monitoring the development of relocation plans by the utility owners and coordinating the relocations during the plan and estimate development phase.

The Location and Design Division, District No Plan Projects Section, or Residency is also responsible for obtaining the plans and estimates from the utility owners. The plans and estimates must be processed in accordance with the requirements outlined in Chapter 11, and forwarded to the Regional Utilities Manager or designee for approval and authorization.

14.7 SPECIAL PROVISIONS

When it is determined that utility relocation will occur during the life of the transportation project, a special provision should be prepared and made a part of the project contract. The procedures for Special Provisions are covered in Section 8.10 of this manual.

14.8 UTILITY CLEARANCE FOR ADVERTISEMENT

The Location and Design Division, District No Plan Projects Section, or Residency must notify the Regional Utilities Manager or designee in writing, no later than 60 days prior to the advertisement of a project, that all arrangements have been made with the utility owners to relocate utilities prior to, or in conjunction with project construction.

The Location and Design Division, District No Plan Projects Section, or Residency is responsible to update RUMS and include the clearance when arrangements for utility relocations have been completed.

14.9 PROJECT SHOWING AND PRECONSTRUCTION CONFERENCE

The Location and Design Division, District No Plan Projects Section, or Residency should invite all utility owners affected by the project to attend the project showing

and preconstruction conference. The utility owner is expected to discuss the involvement and status of the relocation work required by the project.

14.10 PERMITS, PROGRESS BILLINGS AND FINAL BILLINGS

Permit requirements for relocation work are covered in Section 13.2.

Progress and final billings submitted by the utility owners for cost incurred in connection with relocation must be processed in accordance with Sections 12.11 and 13.3.

14.11 MONITORING/RUMS

The Location and Design Division, District No Plan Projects Section, or Residency is responsible for monitoring progress of the utility relocation work on No Plan projects to assure that all phases are on schedule.

The Location and Design Division, District No Plan Projects Section, or Residency must update RUMS as each phase of the project is completed.

The Location and Design Division, District No Plan Projects Section, or Residency may request assistance and technical guidance from the Regional Utilities Manager or designee regarding the requirements to relocate utilities.

Guidelines for preparing and conducting the utility field inspection for no-plan projects are shown in Appendix 3.

14.12 GENERAL – DESIGN BUILD PROJECTS

VDOT has traditionally delivered transportation projects through the Design-Bid-Build process. In an effort to effectively and efficiently continue the Department's commitment to maintaining and improving the Commonwealth of Virginia's Transportation infrastructure, the Department has expanded its project delivery methods beyond the traditional Design-Bid-Build methods. In 2001 the General Assembly amended the Code

of Virginia to allow the Commonwealth Transportation Board (CTB) to authorize the award of Design-Build contracts. The development of a VDOT Design-Build project differs significantly from the development of a Design-Bid-Build project. Where the Design-Bid-Build project involved three sequential project phases, the Design-Build project combines engineering and construction activities into a single, fixed-fee contract. The documentation necessary for the advertisement of a Request for Proposal (RFP) includes preliminary plans comprised of the basic geometric configuration for the project. The Offerors participating in the Design-Build procurement process rely on the preliminary plans and the information in the Technical Requirements form and RFP to develop the technical and price proposal for design and construction of the project.

14.12.1 UTILITY RELOCATIONS ON DESIGN BUILD PROJECTS

The Design Build Contractor is encouraged to design the project to avoid conflicts with utilities. When utility conflicts cannot be avoided, it is the design builder's responsibility to coordinate the relocation of the utility according to VDOT's policies and procedures for utility relocations as outlined in this manual. The Design Build Contractor is responsible for all activities and cost related to utility relocation construction on the Design Build project including reimbursement to the utility owner. The Design Builder is expected to include these costs in their proposal. The Design Builder assumes all risks associated with utility relocations for the project and does not receive any additional compensation for any delays or inconveniences associated with the relocation of utilities on the project.

14.12.2 PROJECT SCOPING KICKOFF MEETING

The Scoping Phase is the initial step in the project development process. The initial involvement that the VDOT Utility Coordinator has on the project is participating in the Project Scoping/Kickoff meeting. The VDOT Project Manager schedules a project scoping meeting and invites a designated person from each discipline to attend. At the Project Scoping/ Kickoff meeting, the project is identified as being delivered through the Design-Build delivery method. The VDOT Project Manager discusses the project necessity and provides an overview of the proposed project and the project limits. Then, he or she will provide a proposed schedule of activities for the project from Scoping to final completion. General Design Build Project Schedule Milestones are as follows:

- PFI plan review begins
- Risk Assessment
- PFI comments due
- PFI meeting
- RFQ Release
- PH plans posted
- Advertise PH
- Traffic Analysis Approved
- PH plans finalized
- PH Team Meeting
- Public Hearing
- Design Approval
- RFP Release
- Technical Proposals Due
- Price Proposals Due
- Notice of Intent to Award
- CTB Approval

- Notice to Proceed
- Project Completion

Typically, the Project Manager will request the Utility Coordinator to prepare a Utility Scoping Report and provide a preliminary utility relocation estimate at the Scoping Phase of project development.

14.12.3 PRELIMINARY PLANS

The Design Builder prepares his proposal based on information provided in the preliminary plans and Technical Requirements of the RFP. The preliminary plans should identify all utilities located on the project and reflect a recent Subsurface Utility Survey. All underground utility data should be obtained and depicted according to CI/ASCE 38-02 SUE Quality Level B. A listing of the utility owners with facilities located on the project should be identified on the preliminary plans and should include the contact person and information for each utility identified.

Once the Preliminary plans reach a stage where the proposed right of way or foot print of the project has been established and unlikely to change, the VDOT Utility Coordinator should review the preliminary plans for any underground utilities located within the proposed construction area and Test-hole data should be requested to aid the Design Builder in preparing his proposal.

14.12.4 EARLY COORDINATION WITH UTILITY OWNERS

Once the preliminary plans have been developed to a point that provides a general overview and concept of the proposed project, the VDOT Utility Coordinator should schedule a meeting with the utility owners that are located

on the project. The Utility Owners should be given an overview of the proposed project and made aware that the project will be a Design-Build project. The Utility Owner should be provided a proposed scheduled and a copy of the preliminary plans. In addition, the Utility Owner should be requested to assemble and provide a copy of their as-built records and prior rights documentation before the release of the RFP. It is each Design Builders' responsibility to meet with the Utility Owners on the project and obtain this information as they're preparing their proposal. The Utility Owners are expected to be consistent with information that they provide to the Design Build Teams.

14.12.5 REQUEST FOR QUALIFICATIONS

After the proposed Design Build Project has been through the public involvement process and Design Approval has been obtained the Design Build Project manager will solicit a Request for Qualifications (RFQ) if the project is a two phase selection process. Potential Offeror's response to the Request for Qualifications is the Statement of Qualifications (SOQ). The SOQ includes a Letter of Submittal, a description of the Offeror's Team Structure, Experience of Offeror's Team and identification of major risks to the project. As part of describing the Offeror's team structure the RFQ identifies Key Personnel for the project and request resume's to be provided. All Offeror's bidding on VDOT Design Build projects that will require utility coordination and relocation should have a member or firm on their team that is experienced in utility relocation and coordination according to VDOT policy and procedure. On Design Build projects that are anticipated to require extensive utility coordination and relocation. The VDOT Special Projects Utility Coordinator or Designee should request that the Lead utility Coordination Manager (LUCM) be identified in the RFQ as a Key

Personnel. The resume for the Lead Utility Coordination Manager (LUCM) should provide direct, verifiable experience of coordinating the relocation of utilities on transportation projects in accordance with VDOT policy and procedures for utility relocation. The resume should provide employment history and account of prior project experience and qualifications that demonstrates the ability to perform the activities and duties required for the position and demonstrates a working knowledge of VDOT's policy and procedures for utility relocation.

14.12.6 REQUEST FOR PROPOSALS

The Request for Proposals (RFP) is the written request for the technical and price proposals on a Design Build project. The RFP is the only solicitation in a single-phase selection process and the second solicitation of a two-phase selection process. The RFP consists of the technical proposal requirements, preliminary plans and the evaluation criteria for the proposed project. The utility section of the technical requirements of the RFP outlines the guidelines for utility relocations on the proposed Design Build project. The utility requirement language that should be included in the utilities section of the RFP can be found in Appendix??. While this template addresses the general utility requirements on a Design Build project additional language may need to be needed to address certain conditions.

14.12.7 PRE PROPOSAL MEETING

At the time Request for Proposals are solicited the Design Build Project Manager holds a pre proposal meeting with the short listed Offeror's to give an overview of the proposed project and the technical requirements. The VDOT

Special Projects Utility Coordinator or Designee is invited to hold a Pre proposal Utility Meeting at this time to review the Utility portion of the technical requirements. The Utility Owner representatives are invited to this meeting to provide a general overview of their facilities that are located within the limits of the project, discuss any special needs or requirements and address any questions that may arise in regards to the utility owners facilities.

14.12.8 CONTRACTUAL GUIDELINES

The following is an example of the typical contract language included in the Design Build and PPTA project contracts between VDOT and the successful team/firm. References to Offeror and Concessionaire denote the team/firm proposing to VDOT for the project. It should be noted language may slightly vary dependent on the project specific needs:

> All efforts and costs necessary for all utility designations, utility locates (test holes), conflict evaluations, cost responsibility determination, utility relocation designs, utility relocations and adjustments, utility reimbursements, replacement land rights acquisition and utility coordination shall be included in the Offeror's Price Proposal; provided, however, that the compensation paid to landowners for replacement land rights will be paid by VDOT as a part of the right of way acquisition costs and shall NOT be included in the Offeror's Price Proposal. Costs for any utility betterment(s) shall not be included in the Offeror's Price Proposal but shall be reimbursed to the Design-Builder through agreement with the requesting utility owner.
>
> Utility information provided on the RFP Conceptual Plans identifies all known utilities, at the time of plan development, that are located within the Project limits. Aerial utilities are identified on the RFP Conceptual Plans and/or in the Survey files by the structure to which they are attached. However, it is the Offeror's responsibility to verify, to their satisfaction, the owner, type, size, height and number of cables attached to the structure when preparing their Price Proposal. All underground utility data was obtained and is depicted in accordance with CI/ASCE 38-02 SUE Quality Level B designation or as denoted on the RFP Conceptual Plans and/or Survey files. However, it is the Offeror's responsibility to verify, to their satisfaction, the owner, type, size, number of cable/conduits, pipes, services, and horizontal and vertical (depth) location of underground utilities to include service

connections and lateral with the utility owners when preparing their Price Proposal.

The Design-Builder shall be responsible for all utility designations, utility locates (test holes), conflict evaluations, cost responsibility determinations, utility relocation designs, utility relocations and adjustments, utility reimbursement, replacement land rights acquisition, utility coordination, and coordination of utility betterments required for the Project. The Design-Builder shall be responsible for all necessary utility relocations, adjustments, and betterments to occur in accordance with the accepted Baseline Schedule.

The Design-Builder shall be responsible for coordination of the Project construction with all utility owners that may be affected. The Design-Builder shall be responsible for coordinating the work of the Design-Builder, its subcontractors, and the various utilities. The Design-Builder shall initiate early coordination with all utility owners with facilities located within the Project limits. The resolution of any conflicts between utilities and the construction of the Project shall be the responsibility of the Design-Builder. No additional compensation or time will be granted for any delays, inconveniences, or damage sustained by the Design-Builder or its subcontractors due to interference from utility owners or the operation of relocating utilities or betterments.

The Design-Builder shall make all reasonable efforts to design the Project to avoid conflicts with utilities, and minimize impacts where conflicts cannot be avoided.

The Design-Builder shall identify and acquire any replacement utility easements or required right of way needs of all utilities necessary for relocation due to conflicts with the Project.

Utility owners and their respective contact information that are known to the Department are provided below for reference only. It is the Design-Builder's responsibility to verify whether other utility owners exist within the Project limits and coordinate with them.

(LIST OF UTILITY OWNERS AND CONTACT INFORMATION)

The Design-Builder shall provide all utility owners with roadway design plans as soon as the plans have reached a level of completeness adequate to allow them to fully understand the Project impacts. The utility owners will use the Design-Builder's design plan for preparing relocation plans and estimates. If a party other than the utility owner prepares relocation plans, there shall be a concurrence box on the plans where the utility owner signs and accepts the relocation plans as shown.

The Design-Builder shall coordinate and conduct a preliminary utility review meeting with all affected utility owners to assess and explain the impact of the Project. VDOT's Project Manager and VDOT's Regional Utilities Manager/Design Build Projects Utility Coordinator (or designee)

shall be included in this meeting.

The Design-Builder shall verify the prior rights of each utility owner's facilities if claimed by a utility owner. If there is a dispute over prior rights with a utility, the Design-Builder shall be responsible for resolving the dispute.

The Design-Builder shall prepare and submit to VDOT a Preliminary Utility Status Report within one hundred and twenty (120) days from the Date of Notice to Proceed that includes a listing of all utilities located within the Project limits and a conflict evaluation and cost responsibility determination for each utility. This report shall include copies of existing easements, As-Built plans or other supporting documentation that substantiates any compensable rights of the utility owner.

The Design-Builder shall obtain the following from each utility owner that has a utility located within the Project limits: relocation plans including letter of "no cost" where the utility owner does not have a compensable right; utility agreements including cost estimate and relocation plans where the utility owner has a compensable right; or letters of "no conflict" where the utility owner's facilities will not be impacted by the Project.

The Design-Builder shall review all relocation plans to ensure that relocations comply with the current editions of the VDOT Utilities Manual of Instruction, the Utility Relocation Policies and Procedures and the VDOT Land Use Permit Manual. The Design-Builder shall also ensure that there are no conflicts with the proposed roadway improvements and ensure that there are no conflicts between each of the utility owner's relocation plans. The Design-Builder shall prepare and submit to VDOT all relocation plans. The Design-Builder is expected to assemble the information included in the relocation plans in a final and complete form and in such a manner that VDOT may approve the submittals with minimal review. The Design-Builder shall meet with VDOT's Regional Utilities Manager/Design Build Projects Utility Coordinator (or designee) within forty-five (45) days from the date of Notice to Proceed to gain a full understanding of what is required with each submittal. The Design-Builder shall receive written approvals from VDOT prior to authorizing utilities to commence relocation construction. The utility owners shall not begin their relocation work until authorized by the Design-Builder. Each relocation plan submitted must be accompanied by a certification from the Design-Builder stating that the proposed relocation will not conflict with the proposed roadway improvement and will not conflict with another utility owner's relocation plan.

At the time that the Design-Builder notifies VDOT that the Design-Builder deems the Project to have reached Final Completion, the Design-Builder shall certify to VDOT that all utilities have been identified and conflicts have been resolved and that those utility owners with compensable rights or other claims related to relocation or coordination with the Project have had their facilities relocated and their claims and

compensable rights satisfied or will be satisfied by the Design-Builder.

The Design-Builder shall ensure the utility owners submit As-Built drawings upon completion of their relocation and/or adjustments. VDOT will issue an as-built permit to the utility owners after receipt of permit application and the As-Built drawings. The Design-Builder shall accurately show the final location of all utilities on the As-Built drawings for the Project in accordance with Part 2, Section 2.16.9 of the RFP.

14.12.9 PROJECT AWARD

Once the contract has been awarded to the selected Design build Team the Lead Utility Coordination Manager is to meet with the VDOT Special Projects Utility Coordinator or Designee within (45) days. At this meeting the VDOT Special Projects Utility Coordinator or Designee gives an overview of the VDOT requirements and expectations for the utility relocations on the project.

14.12.10 PRELIMINARY UTILITY STATUS REPORT

Within (120) days of the award of the Design Build contract the Lead Utility Coordination Manger is to provide the VDOT Special Projects Utility Coordinator or Designee with a Preliminary Utility Status Report. The report is to include a listing of all utilities that are located within the limits of the project and a conflict evaluation and cost responsibility determination for each utility. The report should include copies of existing easements, as-built plans and other documentation that substantiates any compensable rights claimed by a utility owner.

14.12.11 MASTER UTILITY AGREEMENT

All Utility relocations on a Design Build project will require the execution of a Master Utility agreement between the Design Builder and the Utility Owner. The Master Utility Agreement is a contract that outlines the manner in which

the Utilities will be performed on the project and the expectations and deliverables of each party. A Master Utility Agreement Template can be found in Appendix.

14.12.12 BETTERMENTS

Any utility betterment requested by a utility owner will be managed through a separate contract between the Design Builder and the Utility Owner. The additional cost for any utility betterment will be paid directly to the Design Builder from the requesting Utility Owner. The Design Builder will not hold the Department liable for any Delay's to the project schedule resulting from a utility betterment.

14.12.13 PLAN & ESTIMATES

A plan & estimate in accordance with Chapter 8 of this manual is required for all utility relocations on the Design Build project. In the event that a Utility Relocation is 100% Utility Owners cost the Utility Owner should provide a detailed relocation plan accompanied by a "Letter of No Cost". It shall be the responsibility of the Design Build Lead Utility Coordination Manager to process all plan & estimates submitted by The Utility Owner's for a Design Build project. The Design Build LUCM is to complete a plan & estimate checklist and certify that the plan & estimate meets the Department requirements as outlined in this manual. Once the Design Builder has reviewed the Utility Owner's plan & estimate and has determined that it is acceptable according to the Department requirement's it should then be forwarded to the VDOT Special Projects Utility Coordinator or Designee for review and approval. The Design Builder must have written approval from the VDOT Special Projects Utility Coordinator or

Designee before authorization can be given to the Utility Owner to begin any Utility Relocation construction work.

14.12.14 RUMS

The VDOT Special Projects Utility Coordinator or Designee is set up the Utility Owners Treeview in RUMS at the Scoping stage of the project. After the project has been awarded to the selected Design Build Team it shall be the Design Build Teams LUCM or Designee to input the Utility Data into RUMS at the appropriate milestone. The VDOT Special Projects Utility Coordinator or Designee should monitor RUMS to insure that the Data is being updated correctly. The VDOT Special Projects Utility Coordinator or Designee is to provide training and guidance as needed to the Design Builder in the use of RUMS.

14.12.15 UTILITY EASEMENT ACQUISITION

The Design Builder is responsible for the acquisition of any replacement Utility Easements that may be required for the Utility Relocations. In most cases VDOT compensates the Landowner for the actual acquisition cost of any Utility Easements that are acquired.

14.12.16 PRELIMINARY UTILITY FIELD REVIEW MEETING

The Design Builder is to hold a preliminary Utility review meeting Utility owners for the projects. The purpose of this meeting is to introduce the Design Build Team to the Utility Owners and give an overview of the proposed project. The Design Builder should also provide the Utility Owners with a preliminary

schedule for proposed project milestone dates. The VDOT Special Projects Utility Coordinator or Designee is to be invited to this meeting.

14.12.17 UTILITY FIELD INSPECTION MEETING

The Design Builder is to hold a Utility Field Inspection Meeting for the project with Utility Owners affected by the project according to the procedures outlined in Chapter 7 of this manual. The VDOT Special Projects Utility Coordinator or Designee is required to be in attendance.

14.12.18 UTILITY RELOCATION COMPLETION

When the Design Builder determines that the project has reached final completion, the Design Builder shall certify to VDOT that all utilities have been identified and conflicts have been resolved and that those utilities with compensable rights or other claims related to relocation or coordination with the Project have been relocated and their claims and compensable rights satisfied or will be satisfied by the Design Builder.

14.12.19 AS-BUILT DRAWINGS

The Design Builder shall accurately show the final horizontal location of all utilities on the As-Built Plans for the Project. The Utilities are to be color-coded using the colors as required by the Underground Utility Damage Prevention Act. (See Chapter 6.3 of this Manual). The as-builts show also indicate the Depths of the relocated underground utilities on the project

14.12.20 PRELIMINARY EXPECTATIONS

Given the nature of the process, the teams/firms proposing to be the successful candidate selected for these projects will be contacting utility owners located

within the proposed project limits. This is in order to identify each utility potentially impacted, identify their respective facilities within the proposed project limits and estimate the potential utility conflicts and cost associated with proposed project construction. It is the expectation of each utility owner will provide consistent information to each of the teams/firms. The teams/firms will use this information to develop the utilities portion of project cost for which they will be responsible and include this cost as part of the overall lump sum project cost.

14.12.21 PROJECT DEVELOPMENT

Once the successful team/firm is awarded the Design Build or PPTA contract, they will be fulfilling the role of VDOT in regards to the utility relocation process. (VDOT will have oversight for all utility relocation activities.) The Lead Utilities Coordination Manager is the lead point of contact for utility related issues on the project and responsibilities will include:

a. Scheduling and holding the Utility Field Inspection with all affected utility owners once project plans are at a level of design to perform this task.

b. Reviewing all Plan and Estimates submitted.

c. Identifying and acquiring all necessary utility easements, either VDOT Joint Use or owners replacement. (The landowner payment cost for necessary easements is to be paid by VDOT or utility owner)

d. Preparing all agreements relative to the utility relocation between the Design Build/PPTA team/firm and utility owners. This includes the agreements for authorization to relocate facilities as well as any

reimbursement terms/agreements. (VDOT's Master Agreements with utility owners cannot be used as VDOT will not be authorizing the utility relocations).

e. Providing Authorization for the utility relocations to each affected utility owner.

f. Coordinating and inspecting the utility relocations.

g. Receiving billings and providing reimbursement to utility owners accordingly.

14.12.22 PERMITS, PROGRESS BILLINGS AND FINAL BILLINGS

Permit requirements for relocation work are covered in Section 13.2.

Progress and final billings submitted by the utility owners for cost incurred in connection with relocation shall be processed by the Design Build/PPTA team/firm prior to project closeout/acceptance.

14.13 GENERAL- PUBLIC PRIVATE PARTNERSHIPS (P3 PROJECTS)

Public Private Partnership Projects or more commonly referred to as P3 Projects is a method of project delivery where VDOT enters into an agreement with a Private Party to design, construct and finance a project. The legal guidance for administering Public Private Partnership Projects can be found in Virginia's Public Private Partnership Act of 1995. (Code of Virginia 56-556 through 56-575). There are several variations of P3 contracts however the most common are as follows.

Design Bid Build
Design Build
Design-Build-Finance

Design-Build-Operate-Maintain-Finance

Lease-Operate-Maintain

14.13.1 UTILITY RELOCATIONS ALONG P3 PROJECTS

Utility relocation along P3 projects is to be administered in the same manner as a typical VDOT project. The Private Party is to follow all policies and procedures as set forth in this manual as amended and the Code of Virginia as amended. The Private Party is granted the benefit of any existing easement or statutory right that VDOT may have along a project. The statutory rights for a PPTA fall under the system for the type of project that is proposed. (See chapter 2.8 of this manual) § 56-570 provides the applicable code reference relating to Utility relocations along PPTA projects and reads as follows.

The private entity and each public service company, public utility, railroad, and cable television provider, whose facilities are to be crossed or affected shall cooperate fully with the other in planning and arranging the manner of the crossing or relocation of the facilities. Any such entity possessing the power of condemnation is hereby expressly granted such powers in connection with the moving or relocation of facilities to be crossed by the qualifying transportation facility or that must be relocated to the extent that such moving or relocation is made necessary or desirable by construction of or improvements to the qualifying transportation facility, which shall be construed to include construction of or improvements to temporary facilities for the purpose of providing service during the period of construction or improvement. Should the private entity and any such public service company, public utility, railroad, and cable television provider not be able to agree upon a plan for the crossing or relocation, the Commission may determine the manner in which the crossing or relocation is to be accomplished and any damages due arising out of the crossing or relocation. The Commission may employ expert engineers who shall examine the location and plans for such crossing or relocation, hear any objections and consider modifications, and make a recommendation to the Commission. In such a case, the cost of the experts is to be borne by the private entity. Any amount to be paid for such crossing, construction, moving or relocating of facilities shall be paid for by the private entity or any other person contractually responsible therefore under the interim or comprehensive agreement or under any other contract, license or permit. The Commission shall make a determination within 90 days of notification by the private entity that the qualifying transportation facility will cross utilities subject to the Commission's jurisdiction.

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CHAPTER 15

INDEPENDENT POLICIES AND PROCEDURES

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INDEPENDENT POLICIES AND PROCEDURES

15.1 GENERAL

There are many Virginia Department of Transportation (VDOT) policies and procedures that affect utility relocation on transportation projects. Most of these policies and procedures have been included in the text of previous chapters of this manual. However, some of VDOT policies and procedures were not directly related to any of these previous chapters.

The following sections of this chapter contain VDOT policies and procedures not previously covered.

15.2 GUIDELINES FOR RELOCATION OF UTILITIES FROM TRAVELED AREAS

15.2.1 GENERAL

These guidelines are applicable to non-limited access roadways controlled and operated by VDOT. Application to streets or roadways controlled by municipalities or counties is on an optional basis.

The general trend on streets within major cities is to place the various types of underground facilities within the street right of way and in numerous cases, under the pavement. VDOT's position has always been that longitudinal installations under the pavement are not desirable. VDOT places fewer restrictions on crossings of roadways.

As a result of the rising cost of utility relocation and, in many cases limited space for relocation, VDOT is modifying its position with regard to allowing utilities under travel areas. (See Land Use Permit Regulations 24 VAC 30-151)

15.2.2 EXISTING FACILITIES

In any case where maintenance records indicate that the existing facility has a history of frequent repairs or problems, the utility should be relocated from under the proposed travel lanes. An evaluation should be made to determine if the problems are related to inadequate maintenance or failures related to age and condition. There may be instances where the utility owner should be asked to pay for the cost to rehabilitate their facility.

Pressure pipes carrying liquid and consisting of asbestos cement (transite) and lead joint cast iron pipe should be relocated unless the optimum cover is maintained. As a general guideline, any situation where the cover to sub-grade is less than 2 feet relocation is required. In any event, design guidelines for pipe loading should be evaluated.

Gravity sanitary sewer pipe, older vitrified clay (terra cotta) or concrete lines should be evaluated to determine their condition. Video TV inspections should be performed as part of the evaluation and the video should be retained to document the preconstruction condition. If the pipe is found to be in satisfactory

condition, then it may remain in place provided the installation meets the other criteria outlined in this guideline.

15.2.3 PROPOSED ROADWAY WITH TWO LANES

It is not desirable to allow pressurized utilities running longitudinally to remain under the roadway travel lanes. Exceptions may be considered if there is no other feasible location and the proposed location falls in the outer 1 foot of the travel lane and the pavement width is greater than 20 feet or turn lanes. For gravity sanitary sewers and telephone or electric duct banks, the location of the manhole shall be the primary factor in determining if relocation is necessary.

It is desirable to relocate the utility if the manhole is located in the proposed intersection, falls in the wheel path of a travel lane, or would interfere with a turning movement at an intersection. Any situation where accessing the manhole would block both travel lanes will necessitate the relocation of the utility.

Otherwise the facility should be allowed to remain in place unless conflicts occur with other proposed construction features. Where possible, the manhole opening should be rotated to place the frame and cover out of the travel lanes.

15.2.4 PROPOSED ROADWAY WITH FOUR OR MORE LANES

When the proposed project will result in four or more lanes and the existing pressure pipe (water, gas, sanitary sewer, etc.) falls within the area of the outside travel lane, on either side of the

roadway, then relocation is not necessary unless it conflicts with other project features. Where the existing utility line meanders from the outside lane to an interior lane, the portion not under the outside lane is to be relocated. Should any significant length of utility line be located in a non-paved median, 14 feet or wider, consideration should be given to allowing the facility to remain in place.

For gravity sanitary sewers and telephone or electric duct banks, the location of the manhole shall be the primary factor in determining if relocation is necessary. Relocation will not be necessary when the manhole falls within a single travel lane and access for maintenance can be facilitated with only a single lane closure.

It is desirable to relocate the utility if the manhole is located in the proposed intersection or would interfere with a turning movement at an intersection. Where possible, the manhole opening should be rotated to place the frame and cover out of the travel lanes.

15.2.5 RELOCATIONS

Those utility lines or the portions of the utility lines, which fail to meet the criteria outlined, shall be relocated. Relocated utility lines should be placed out from under the pavement area except where they connect to the existing facility. Should surrounding physical conditions make the relocation of the facilities out from under the pavement impossible or impractical, then the relocated lines should be located in a manner conforming to these guidelines.

When the proposed relocation involves a portion, which meanders between travel lanes, the relocated portions should begin and end in a manner that would permit future maintenance and would not disrupt more than the outside lane.

15.2.6 MITIGATION OF FUTURE ACTIVITIES

It is recognized that by allowing a utility facility to remain under the travel lane that future maintenance or new service requirements will most likely require a lane closure and pavement cutting. Future activities will be in accordance with the normal permitting practices and these activities will be subject to VDOT's approval. This may include the requirement for night work on certain roadways.

The construction project, which initially places the utility facility under the travel lanes, should include the installation of branches or stub-outs based upon best anticipation of future requirements. This could include sanitary service laterals and other service connections.

Where an existing utility has been allowed to remain in the median area, any future connections or services shall be bored or jacked from the outside. The appropriate excavation shall be allowed in the median to facilitate the connection.

15.3 ADJUSTMENT OF ROADWAY LIGHTING

When lighting exists within a VDOT project on the Arterial, Primary or Secondary systems, whereby the utility poles to which they are attached

are to be relocated or adjusted as a result of the project construction, the following requirements and procedures are to be followed:

15.3.1 REQUIREMENTS

a. Whenever a lighting fixture is affixed to a utility pole which must be relocated or adjusted as a result of VDOT project construction, the cost for transferring or removing the existing bracket arm and luminaries shall be determined to be the same as the cost responsibility for the pole or standard to which it is attached.

b. The widening or reconstruction of the roadway and the accompanying relocation or adjustment of utility poles to which lighting fixtures are attached, may necessitate upgrading of the lighting facilities to meet the design criteria of VDOT. The Location and Design Division, Traffic Engineering Section, is charged with the responsibility of determining acceptable levels of illumination.

   In such cases, when said lighting facilities are erected under a permit issued by VDOT, the cost of any upgrading required to meet the design criteria as a result of the changed conditions must be borne by the owner.

c. Whenever utility poles, which have lighting fixtures attached, must be relocated for a VDOT project, the plans of adjustment shall include separate plan sheets or sketches covering the existing and proposed lighting facilities need to be submitted

to the Traffic Engineering section for review and approval. All lighting installations placed upon or overhanging VDOT right of way shall be covered by a separate land use permit. Said permit for lighting shall be submitted along with the plan of adjustment and estimate of cost to relocate or adjust the poles. Special attention is called to the fact that the submittal of the permit application for lighting prior to the approval of the plans and estimate is a deviation of the usual procedure of submitting a permit for the as-built pole adjustment at the billing stage.

15.3.2 PROCEDURES

a. The Regional Utilities Manager or designee should determine the owner of the utility poles to which lighting fixtures are attached. From the owner, he should obtain the name of the customer or lessee of the lighting fixtures; however, negotiations for the arrangements of the relocation or adjustment of utility poles containing lighting fixtures should be confined to the owner of the poles.

b. In conducting the utility field inspection when lighting is involved, the Location and Design Traffic Engineering Section should be in attendance to assist in determining the best method of adjustment and in advising of VDOT's requirements and to make recommendations.

c. The owner of the poles should advise its customers or lessee of the lighting fixtures of the need to relocate said

facilities to conform with the project requirements. The owner should also advise its customer of the possible need to upgrade the lighting facilities to meet the new roadway conditions and of the customer's responsibility to bear such betterment costs. The customer's ability and willingness to bear such costs should be taken into consideration in the utility owner's design of the adjusted facility.

The utility owner, after notification of VDOT's approval of the lighting plans, shall submit the lighting permit to the appropriate District Land Use Section.

15.3.3 POLES AND STANDARDS EXCLUSIVELY FOR LIGHTING

Lighting poles and standards that do not provide support for any utility other than the lighting fixture and its conductor should not be included in a utility relocation plan and estimate. The relocation of these lighting poles or standards should be initiated by the utility owner or locality with the Location and Design, Traffic Engineering Section. Any costs or agreements associated with installation of roadway lighting shall be coordinated by the Project Manager with the locality, utility owner, and Traffic Engineering Section. Invoices for lighting shall not be paid by the VDOT Utilities Section.

15.4 POLICY GOVERNING TRANSMISSION LINES THROUGH SUBDIVISION STREETS WHEN STREETS ARE TO BE TAKEN INTO THE SECONDARY SYSTEM OF STATE HIGHWAYS

WHEREAS, the Commonwealth Transportation Commission adopted on November 19, 1964 a policy entitled "Policy Governing Gas or Petroleum Products Transmission Pipelines Through Subdivisions When Streets are to be Taken into the Secondary System of State Highways"; and

WHEREAS, it is felt that the above-noted policy adopted on November 19, 1964 is too restrictive and is in need of revisions.

NOW, THEREFORE, BE IT RESOLVED, that the State Highway Commission, effective this date, rescinds the policy adopted by the State Highway Commission on November 19, 1964; and

BE IT FURTHER RESOLVED, that the State Highway Commission hereby adopts the following policy entitled "Policy Governing Gas or Petroleum Products Transmission Pipelines Through Subdivision Streets When Streets are to be Taken into the Secondary System of State Highways," effective January 18, 1968;

a. When a gas or petroleum products transmission pipeline is to be constructed through on existing subdivision, the street right of way may be utilized under the following conditions.

(1) Provided the pipeline is constructed in conformity with standards, specifications, and safety regulations of the applicable pipeline code for the ultimate use of

pipeline and for the ultimate development, traffic volume, and population density of the area.

(2) Provided the pipeline is not constructed under the pavement or shoulders of the street (except for crossings), The pipeline may be constructed in the median or sidewalk areas on non-limited access streets if it will not conflict with other utilities, drainage facilities, or other roadway features.

(3) Provided the pipeline is covered by a permit which places all liability for the pipeline and any damage to person or property, and the responsibility for future adjustments of the pipeline, upon the public service corporation.

b. When a gas or petroleum products transmission pipeline or any other type of transmission line is existing through an area which is to be developed as a subdivision, the developer may lay out the streets to include the pipeline under the following conditions:

(1) Provided the pipeline was constructed in conformity with standards, specifications, and safety regulations of the applicable pipeline code for the ultimate use of the pipeline and for the ultimate development, traffic volume, and population density of the area.

(2) Provided the pipeline will not be located under the pavement or shoulders or the streets (except for crossings). The pipeline may remain in median or sidewalk areas on non-limited access street if it does not conflict with other utilities, drainage facilities, or other roadway features.

(3) That, upon application by the developer to VDOT to take over the subdivision streets for maintenance, the public service corporation will, in exchange for a permit granted in accordance with the Land Use Permit Regulations (24 VAC 30-151), quitclaim to the State its easement and/or right of way within the subdivision street with the following reservations:

A. That the transmission pipeline may continue to occupy such street in its existing condition and location;

B. That the public service corporation will be responsible for such pipeline and for any damages to persons or property resulting therefore; and

C. That in the event VDOT should later require for its purposes such public service corporation to alter, change, adjust, or relocate such transmission pipeline, the non-betterment cost of

any such alteration, change, adjustment, or relocation will be the responsibility of VDOT.

(4) In the event the above conditions cannot be met, the developers shall layout and develop the subdivision so that the pipeline is contained in a distinct and separate easement and/or right of way of its own. In this case it will still be necessary for the public service corporation to comply with Section 15.4 b.(3) above, where the pipeline crosses any streets, insofar as the crossing is concerned.

15.5 RAILROAD COMMUNICATION AND SIGNAL LINES

The VDOT Railroad Coordination Section handle railroads and railroad communication and signal lines that are encountered on VDOT construction projects. This Section deals with the railroad companies to obtain agreements with them for grade crossings, separations and warning devices. Whenever relocation of the railroad communication or signal lines is required, it is incorporated into the railroad agreement.

15.6 POLICY ON PLACING UTILITY FACILITIES UNDERGROUND

This policy applies to transportation projects that are created and constructed in accordance with Section 33.2-348 of the Code of Virginia, as amended, which covers the Urban System of Highways and to projects in Arlington County.

This policy shall not apply to overhead electric transmission facilities, which operate at a phase to phase voltage in excess of 40 KV due to excessive

costs and potential operational problems. Where placing a telecommunications facility underground will cause a potential operational problem, an analysis shall be made to determine if the under grounding is warranted.

15.6.1 POLICY

Since by tradition and practice, highway and utility facilities frequently coexist within common rights of way or along the same transportation corridors, it is essential in such situations that these public service facilities be compatibly designed and operated.

The potential impact on the highway and its users should be considered in the design and location of utility facilities on or along highway rights of way. The manner in which utility facilities are located with respect to the traveled roadway can materially affect the highway, its safe operation, aesthetic quality and maintenance.

Similarly, due to replacement cost theories, most utility relocation plans are developed based upon a similar replacement facility. Existing overhead utility facilities are usually placed in a new overhead position, which is compatible with the proposed roadway features and the clear roadside recovery policy. Existing overhead utility facilities have previously been placed underground when project design features left no other choice.

Therefore, in the applicable situations as outlined in Section 15.6 and when the requirements as outlined in Section 15.6.3 have been met, the Commissioner is authorized to reimburse the utility

company for a portion of the additional costs to replace existing overhead utility facilities with underground facilities. This shall include customer service lines, which are located between the distribution facility and the building or meter point.

Whenever the geographic features of the highway corridor would permit an offsite overhead relocation of the existing utility facilities, the locality, utility owner and the Department may agree to such a relocation plan, instead of placing the facilities underground, so long as the offsite overhead relocation is the most cost effective alternative.

When overhead utility facilities are replaced with underground facilities, certain appurtenances that are normally installed above ground in accordance with accepted utility practices may be so installed. These include equipment such as electric distribution transformer, switchgears, meter pedestals, telephone and cable television pedestals, and terminals and other similar equipment.

Meters and service connections attached to buildings may continue to be attached above ground.

Within the selected project area, for placement of the facilities underground in accordance with this policy, the underground facilities shall extend a maximum of 150 feet beyond the end of the proposed construction, for any connecting side street or roadway, unless it is determined to be necessary from an engineering standpoint to extend beyond this limit.

In no instance, shall any betterment cost, as determined in accordance with the Department's Utility Manual, be paid by the Commissioner.

When necessary to facilitate the project construction sequencing or the physical characteristics of the project site, temporary overhead lines may be installed in connection with projects selected for replacement with underground facilities in accordance with this policy. The cost of this temporary work shall be apportioned among the locality, utility owner and the Department in accordance with the cost responsibility determination. If temporary work is accomplished solely to accelerate the construction of the highway project, the cost of the temporary work for this purpose shall be paid as a project cost.

15.6.2 DEFINITIONS

For the purposes of this regulation, the following definitions should apply:

a. Utility - a privately, publicly or cooperatively owned line, facility or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any firm or police signal system or street lighting system, which directly or indirectly

serves the public. The term utility shall also mean any wholly owned or controlled subsidiary of a utility company.

b. Betterment - any upgrading of the utility facility being relocated that is not attributable to the highway construction or the placing of the facility underground and is made solely for the benefit of and at the election of the utility. Any materials or items of work determined by the Department to be the standard underground replacement for a functionally similar overhead material or item of work shall not be considered betterment.

c. Relocation - the adjustment of utility facilities required by the highway project. It includes removing and reinstalling the facility, including necessary temporary facilities, acquiring necessary rights of way on the new location, moving, rearranging or changing the type of existing facilities and taking any necessary safety and protective measures. It shall also mean constructing a replacement facility that is both functionally equivalent to the existing facility and necessary to continuous operation of the utility service, the project economy or sequence of highway construction.

d. Theoretical Replacement Facility - a preliminary utility relocation engineering design, of sufficient detail, which indicates the necessary utility relocations required for the most economical adjustments necessitated by highway project

construction. This design shall be based upon the standard of practice prevalent across the state and the latest design criteria of the Department.

e. Theoretical Replacement Facility Cost - an engineering cost estimate prepared for the theoretical replacement facility.

15.6.3 GENERAL REQUIREMENTS

The local governing body must enact or have enacted an ordinance or regulation establishing an underground utility district, corridor or area. The ordinance must require that all new utility facilities, publicly or privately owned, be installed underground and should include criteria where modifications to existing overhead facilities will necessitate placing the replacement utility facilities underground. The boundaries of the underground utility district, corridor or area should be based on logical termini points at which changes in physical characteristics occur.

The local governing body must provide the Department with a resolution, in connection with a proposed transportation project, requesting that the Department have the utility relocations placed underground as a part of the project. They may elect to include all or a portion of the project area provided the previously described ordinance or regulation is effective within the selected limits. A copy of the locality's ordinance or regulation shall be provided with the resolution.

The resolution or ordinance shall also include assurances that future utility facilities required for any proposed improvement, including street lighting, shall not be permitted to be placed overhead within any section of a street or roadway where the utility facility was placed underground in accordance with this policy. In addition, assurances shall be included in the resolution that the local governing body has the financial resources available to pay its share of the costs to place facilities underground as defined in Section 15.6.4 and the appropriate official shall be authorized to execute an agreement with the Department and the utility owner for the necessary utility relocation.

The Commissioner shall determine which projects are eligible for federal funding and shall utilize the available federal funds on those projects, which meet the Department's overall program objectives. The decision to utilize or not utilize federal funds shall, in no way, affect the Commissioner's financial participation under this policy. The locality shall not directly request federal funds for the payment of its share of any additional costs, as defined in Section 15.6.4.

15.6.4 COST DEVELOPMENT AND REIMBURSEMENT

The utility owner will prepare a plan for the theoretical replacement facility of sufficient detail that a cost estimate can be prepared. The plan may be red- lined on the highway plan sheets and a copy is to be submitted to the Department.

The utility owner using the cost estimating system approved for use on highway relocation projects shall prepare an engineering estimate of the theoretical replacement facility cost. This estimate shall include all customary overhead loadings.

The Department shall prepare the cost responsibility determination form (UT-9) in accordance with the Department's Utility Manual, based upon the existing facilities in conflict with the proposed construction and those that would be relocated based on the theoretical replacement facility plan. In accordance with the procedures, the utility owner shall provide any additional compensable rights documentation to the Department in order that final cost reimbursement can be developed. This prorating of cost shall be defined as a percentage and shall be applicable to the theoretical replacement facility cost.

The utility owner shall prepare a plan and estimate assembly, as defined in the Utility Manual, for the utility relocations proposed to be constructed in connection with the highway project. The plan and estimate shall be based on placing utility facilities underground for the portion of the project selected by the locality in accordance with this policy.

Whenever it is in the best interests of all involved parties, a portion or all of the utility relocation work (such as conduits, manholes, etc.) may be included in the highway contract as work to be performed by the highway contractor. Any work included in the highway

contract shall be constructed to the standards and specifications of the utility owner. Appropriate special provisions should be prepared regarding coordination of the contract work with any work to be performed by the utility owner.

The necessary changes to the customer service line between the distribution facility and the meter base shall be included in the utility owners plan and estimate as a part of the additional project expense. Any necessary conversion of the customer's premises wiring and/or service cable location shall be included in the additional cost to place utility facilities underground. The locality, utility owner and the Department shall agree on the method to facilitate any necessary changes to the customer's service location.

The cost of the replacement easements required for the theoretical replacement facility will be a normal project cost in accordance with the Utility Manual. The Department may include a portion or all of the cost of the acquisition of additional replacement utility easements required by placing the facilities underground in cost of the project.

The cost estimate prepared for the proposed utility relocation shall include a breakout and deduction of any betterment cost resulting from any upgrading included at the election of the utility owner. In addition, the final estimated relocation cost shall be allocated to

the appropriate responsible party in accordance with the following reimbursement schedule.

If it is elected that utilities be placed underground in accordance with this policy, the Commissioner shall reimburse the utility companies for non- betterment utility relocation work as follows:

Part A Cost

The theoretical replacement facility cost developed by the utility owner and accepted by the Department.

Reimbursed by:

Project Funds - 98% of the portion of the prorate percentage shown as State cost on the cost responsibility determination form (UT-9) prepared for the project.

Locality - 2% of the portion of the prorate percentage shown as State cost on the cost responsibility determination form (UT-9) prepared for the project.

Utility Company - that portion of the prorate percentages shown as utility cost on the cost responsibility determination form (UT-9) prepared for the project.

Part B Cost

The additional cost to place the utility facilities underground in accordance with this policy. This is the mathematical difference between the proposed estimated underground

relocation cost, accepted by the Department, and the theoretical replacement facility cost.

Reimbursed By:

Project Funds - 50% of the additional cost. The maximum reimbursement to utility companies from project funds for any Part B cost shall not exceed $5,000,000 on any project. (On May 1, 1996, the CTB passed a resolution to increase VDOT's maximum cost to $5,000,000 per project.). (In the following cities these costs are covered at 100%, not to exceed $5,000,000 per project: Chesapeake, Hampton, Newport News and Richmond).

Locality - 50% of the additional cost. Utility Company - None.

After each party's share of the reimbursement cost has been determined in accordance with the above, the sum of all parts shall be computed for each party. The utility company's portion of the total estimated cost shall be established as a flat charge to be deducted from the actual costs accumulated for the project. The remaining portion of the estimated cost shall be computed as a percentage to be borne by project funds and a percentage to be

borne by the locality. The proposed plan and estimate shall be approved and authorized by the Department.

The utility owner shall submit billings to the Department deducting any betterment credit and any applicable flat charge, indicating each parties share of the actual relocation cost. The Department shall reimburse the utility company for work performed and shall charge the locality's Part B cost to an accounts receivable code. The Department will bill the locality as charges are accumulated and the locality shall reimburse the Department within 30 days upon receipt of an invoice. A final billing shall be prepared in accordance with the Utility Relocation Procedures Manual, and will be subject to the audits as outlined in the agreement.

15.6.5 EFFECTIVE DATE

This policy shall be effective on the date the Commonwealth Transportation Board's approval is obtained. This policy shall not be retroactive to any utility relocation work, which was authorized for construction prior to that date.

15.6.6 COMMONWEALTH TRANSPORTATION BOARD'S DIRECTION

The Commonwealth Transportation Board due to its concern with the overall availability of transportation funds established a ceiling on how much project funds should be expanded for the purpose of placing utility facilities underground. They directed that new transportation projects be established based upon need and logical

termini points and not in a manner to bypass the maximum expenditure per project ceiling.

APPENDICES

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APPENDICES INDEX

APPENDIX NO.	APPENDIX SUBJECT
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3.	GUIDELINES FOR PREPARING AND CONDUCTING THE UTILITY FIELD INSPECTION (NO-PLAN PROJECTS)
4.	FORM UT-9
5.	FORM UT-4
6.	EXAMPLE LETTER – UTILITY OWNER REQUEST TO USE CONSULTANT
7.	EXAMPLE LETTER – REQUEST BY UTILITY OWNER FOR VDOT TO OBTAIN UTILITY EASEMENTS
8.	UTILITY EASEMENT CHECKLIST TO BE SUBMITTED WITH R/W – 24 REPORT, WHEN NECESSARY TO FILE CERTIFICATE
9.	FORM UT-11 (UTILITY COST ESTIMATE FORMAT)
10.	EXAMPLE – NARRATIVE STATEMENT
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13.	ACCEPTABLE STANDARDIZED TELEPHONE CABLE SIZES REGULARLY PRODUCED AND COMMONLY USED
14.	EXAMPLE LETTER – UTILITY OWNER SUBMISSION OF PLAN AND ESTIMATE TO VDOT
15.	PLAN AND ESTIMATE CHECKLIST
16.	EXAMPLE LETTER – REQUEST BY UTILITY OWNER TO USE VDOT ON-CALL CONSULTANT AND TO INCLUDE RELOCATION IN VDOT CONTRACT
17.	EXAMPLE LETTER – REQUEST BY UTILITY OWNER TO USE PROPRIETARY MATERIALS FOR RELOCATION WORK
18.	EXAMPLE LETTER – INCIDENTAL COSTS TO BE INCURRED BY UTILITY OWNER IN CONNECTION WITH IN PLAN WORK
19.	EXAMPLE – SPECIAL PROVISION
20.	FORM UT-7 (DAILY RECORD OF UTILITY WORK)
21.	INFORMATION TO BE REFLECTED IN PROGRESS BILLINGS FROM UTILITY OWNERS
22.	INFORMATION TO BE REFLECTED IN FINAL BILLINGS FROM UTILITY OWNERS
23.	PROGRESS BILLINGS CHECKLIST
24.	FINAL BILLING CHECKLIST
25.	CHAPTER 1 – FHWA, DOT, PART 645 – UTILITIES (23 PAGES)
26.	LIST OF UTILITY COMPANIES HAVING SIGNED MASTER AGREEMENT
27.	3-PARTY AGREEMENT – UTILITY OWNER, MUNICIPALITY, AND VDOT
28.	2-PARTY AGREEMENT – MUNICIPALITY AND VDOT
29.	BRIDGE ATTACHMENT AGREEMENT
30.	3-PARTY AGREEMENT TO UNDERGROUND UTILITY FACILITIES
31.	SECTION A-2 CLEAR ZONE GUIDELINES (12 PAGES)
32.	PUBLIC RIGHTS-OF-WAY USE FEE (VA LAW SECTION 56-468.1)
33.	REIMBURSEMENT FOR RELOCATION COST (VA LAW SECTION 56-468.2)

34. RIGHT TO ERECT LINES PARALLEL TO RAILROADS; OCCUPATION OF ROADS, STREETS, ETC.; LOCATION OF SAME (VA LAW SECTION 56-458)

35. FRANCHISE TO OCCUPY PARKS, STREETS, ETC.; IMPOSITION OF TERMS, CONDITIONS, ETC., AS TO USE OF STREETS, ETC., AND CONSTRUCTION THEREON (VA LAW SECTION 56-462)

36. FORM C-5 (REPORTING STARTING AND COMPLETION OF PROJECTS)

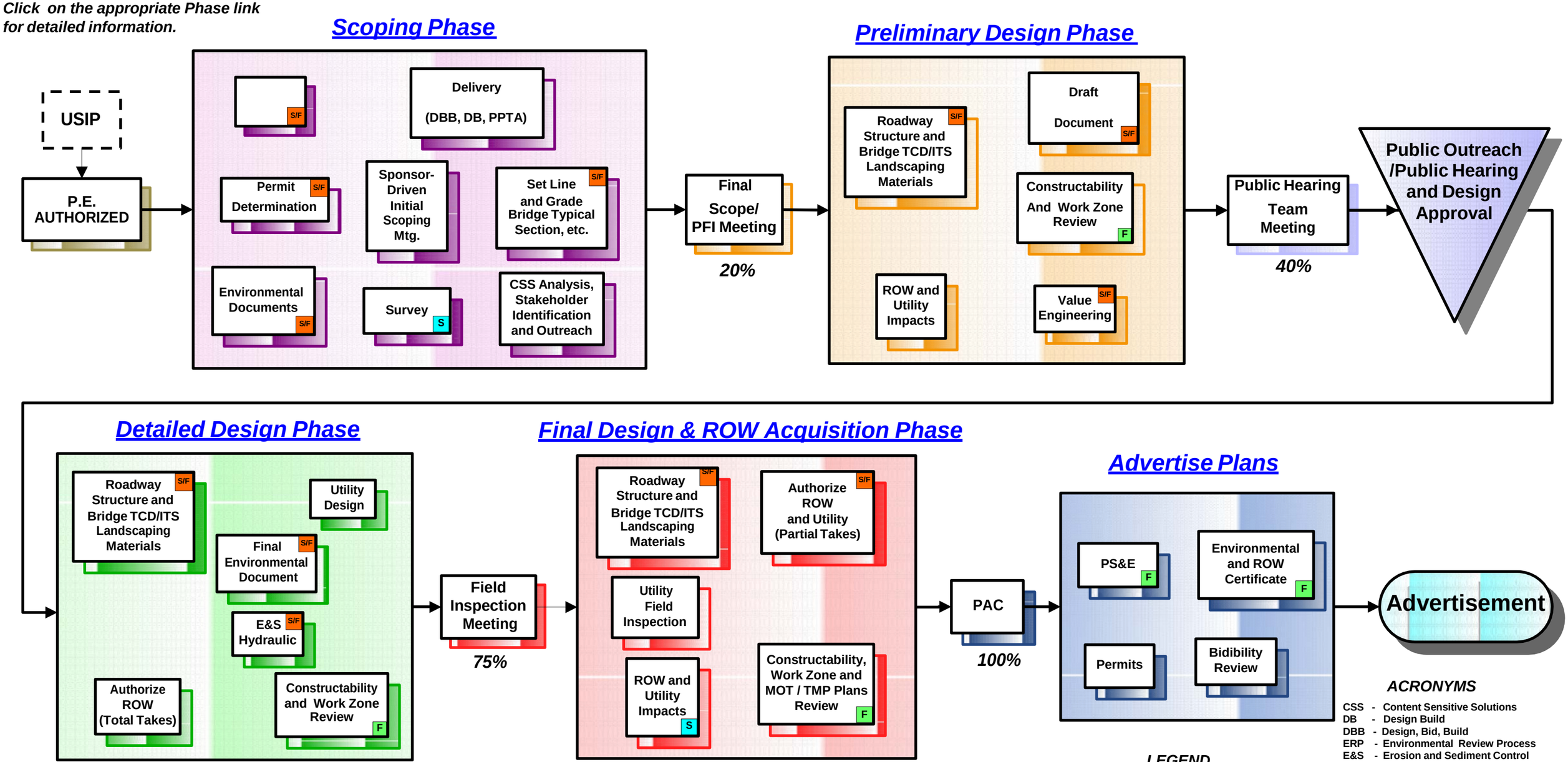
37. DESIGN BUILD MASTER AGREEMENT TEMPLATE

38. TRENCHLESS EXCAVATION

VDOT Project Development Process

Thursday, June 30, 2011

Click on the appropriate Phase link for detailed information.



CODE REQUIREMENTS

For Applicable State and Federal Code regulations please click on box indicated with S, F or S/F

LEGEND

- S — State Required
- F — Federal Required
- S/F — Federal / State Required

ACRONYMS

- CSS - Content Sensitive Solutions
- DB - Design Build
- DBB - Design, Bid, Build
- ERP - Environmental Review Process
- E&S - Erosion and Sediment Control
- ITS - Intelligent Transportation Systems
- MOT - Maintenance of Traffic
- PAC - Pre-Advertisement Conference
- PE - Preliminary Engineering
- PFI - Preliminary Field Inspection
- PPTA - Public Private Transportation Act
- PS&E - Plans, Specifications & Estimate
- ROW - Right of Way
- TCD - Traffic Control Device
- TMP - Traffic Management Plans
- USIP - Unified Six Year Improvement Program

Project Management Policy

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GUIDELINES FOR PREPARING AND CONDUCTING THE UTILITY FIELD INSPECTION (PLAN PROJECTS)

1. Receive utility field inspection plans.

    a. Determine if comments from the project field inspection have been incorporated and the plans are in sufficient detail to conduct a meaningful utility field inspection.

2. Determine project target dates.

    a. Date when plans will be approved for right of way.

    b. Advertisement date.

    c. Date when project construction will begin.

3. Determine date when replacement easement plans are needed for inclusion into the right of way plans.

4. Determine date when plans and estimates are needed.

5. Determine date when plans for in-plan work are needed.

6. Determine the name of all utility owners affected.

7. Color code plans to indicate all utility facilities within project limits.

8. Make an in-depth field study and inventory all utility facilities located within project limits.

    a. Make a cost responsibility determination of all facilities within project limits.

    b. Prepare UT-9

    c. If necessary, consult with the owner to determine size, type material and depth of underground utility facilities.

    d. Determine utility facilities that are in conflict by using available information such as test hole data sheet, profiles or cross sections to determine conflict with grade, drainage or other roadway features.

9. Schedule the utility field Inspection and submit plans to the affected utility owners.

10. Conduct the utility field inspection. It may be necessary to conduct the utility field Inspection in two sessions when both aerial and underground facilities are involved.

11. Pertinent information regarding the project must be provided during the utility field inspection, such as:

    a. Project location, length, and etc.

    b. Project number that is to be used by the utility owner.

    c. Project target dates.

    d. Date when easement plans are needed.

e. Date when plans and estimates are needed.

f. Furnish copies of UT-9 to the utility owners.

g. Review the project plans with each utility owner and allow them to mark their plans showing their utility facilities within project limits, pointing out the facilities in conflict.

h. Discuss and reach agreement on cost responsibility for each utility facility within project limits. When prior rights are claimed by a utility owner it will be necessary for them to provide documentation to support their claim.

i. Discuss possible method of relocation with each utility owner.

j. Discuss easement requirements. (Replacement or VDOT Joint Use)

k. Discuss requirements for bridge attachments, when applicable.

l. Discuss requirements for environmental permit information, when applicable.

12. When required, arrange scoping meeting with utility owner, VDOT's on-call consultant and central office utility section.

    a. Utility owner is required to provide a letter requesting VDOT's on-call consultant to design relocation plans.

    b. Utility owner is required to provide letter requesting that the relocation be included into VDOT's project plans for work to be performed by the project contractor.

    One letter may be provided by the utility owner to satisfy the requirements of the above.

13. Confirm the utility field inspection using the appropriate letter.

    a. Send utility owner an updated copy of UT-9 or Underground Utility Data Sheet.

    b. Send utility owner form UT-4

14. Enter required data in RUMS within 48 hours after the associated milestones and update PCES if necessary.

Virginia Department of Transportation

Appendix No. 3
Sheet 1 of 2
Revised 8-26-03

GUIDELINES FOR PREPARING AND CONDUCTING THE UTILITY FIELD INSPECTION (NO-PLAN PROJECTS)

1. Determine the location of centerline for the proposed roadway.

2. Determine the typical section required for the proposed roadway,

3. Determine where cuts and fills will be required throughout the project and the approximate amount of cut or fill to be made.

4. Determine where other roadway features, such as storm drainage and box culverts, will be constructed.

5. Determine the location of proposed right-of-way.

6. Determine the location of construction limits within the right of way and easements.

7. Determine the name of all utility owners affected by the project.

8. Make an in-depth field study and determine where all existing aerial and underground utility facilities are located within project limits.

9. Make a cost responsibility determination of all facilities within project limits. (See Legal Section Chapter 2)

10. If necessary, consult with the utility owner to determine size, type material and depth of water, sanitary sewer and gas lines or other underground utility facilities.

11. Prepare simple sketch's to indicate the existing and proposed right of way, centerline and other appropriate roadway features.

12. Inventory utility facilities within project limits and indicate the utility facilities on the simple sketch.

13. Prepare UT-9's (Appendix 4) for each utility owner and include all facilities within project limits regardless of their conflict status.

14. Schedule the utility field inspection with each of the affected utility owners.

15. Conduct the utility field inspection. See Chapter 14.

16. It may be necessary to conduct the utility field inspection in two sessions when both aerial and underground utilities are involved.

17. Provide pertinent information regarding the project such as:

    a. Project location , length and etc.

    b. Project numbers to be used by the utility owner.

    c. Project advertisement date.

    d. Date when project construction will begin.

    e. Date when the utility relocation plans and estimates are needed.

    f. Date when utility relocation should ideally be completed.

    g. Furnish pencil copies of form UT-9. (Appendix 4)

18. Review the project with each utility owner and allow them to make notes that pertain to the utility facilities within project limits, pointing out the facilities in conflict.

19. Discuss and reach agreement on the cost responsibility for each utility facility within project limits. It may be necessary for the utility owner to furnish additional information to support prior rights claim.

20. Discuss a method of relocation for the utility facilities with each utility owner.

21. Discuss easement requirements. When the right-of-way is to be obtained by an omnibus deed the utility owner will be required to present the easement form to the landowners after the landowner has signed the omnibus deed.

22. Discuss requirements for bridge attachments, when applicable.

23. Discuss requirements for environmental permit information, when applicable.

24. Confirm the utility field inspection using the appropriate letter in the all-in-one library.

25. Send Utility owner copy of completed form UT-9 (Appendix 4)

26. Send utility owner form UT-4. (Appendix 6)

27. Enter required data in RUMS within 48 hours after the associated milestones.

Sheet 1 of 2

Project:_____ UPC: _____

Determination of Cost Responsibility Made By:
_____
Date: _____

Utility Owner:_____
Utility Owner Rep.: _____
VDOT Rep.: _____

Date of Utility Field Inspection: _____

Project Prorate: State_____% Utility_____% (Percentage to be determined to the nearest tenth.)

SHOW ALL FACILITIES WITHIN THE PROJECT LIMITS AND PROPOSED RIGHT OF WAY LINES (INCLUDING CONNECTIONS).

Plan Sheet No.	Route or Street	Type and/or Size Facility **See Legend		Stations From - To	L or R	Distance from Center Line	Relation to Existing Hwy. R/W ***		Cost Resp UT or ST	*Auth. Docum.	Units Used to Determine Cost Resp.	Remarks
		Type	Size/Pole No.				ON	OFF				

***** From the list below, select the appropriate authority or documentation which makes the state responsible for the cost of the utility and indicate same in the "Authority or Documentation" column by referring to the corresponding number:

1. 33.2-348 used on urban projects for utilities owned by a municipality, public utility district or public utility authority
2. 33.2-307 (a) used on Interstate in cities or towns for utilities located in city streets.
3. 33.2-307 (b) used on Arterial projects for utilities owned by a county, city, town or public utility authority located in existing streets.
4. 33.2-308 used on Interstate and Primary projects in counties for all utilities owned by a county or political subdivision of the state or county and for water or sanitary sewer owned by a city or town located extending into any county.
5. 33.2-330 used on secondary projects for utilities owned by county, city, town, authority or district.
6. 33.1-1701 used on certain bond projects.
7. 33.2-1014 used for utilities located on private property.
8. Prior rights.
9. Prior agreements (provide date_____)
10. (other) _____

** **P**=Pole, **T**=Buried Tel. Cable, **TC**=Tel. Conduit, **PD**=Pedestal, **G**=Gas, **W**=Water, **S**=Sewer, **SFM**=Sewer Force Main, **MH**=Manhole, **TV**=Buried Cable TV, **UE**=Underground Electric
***Use Linear Meters (linear feet) in the proper column for entry of underground utilities and an X or ✓ for other units not requiring a length of measurement.
.

Sheet 2 of 2 UTILITY:_____ PROJECT: _____

SHOW ALL FACILITIES WITHIN THE PROJECT LIMITS AND PROPOSED RIGHT OF WAY LINES (INCLUDING CONNECTIONS).

Plan Sheet No.	Route or Street	Type and/or Size Facility **See Legend		Stations From - To	L or R	Distance from Center Line	Relation to Existing Hwy. R/W ***		Cost Resp UT or ST	*Auth. Docum.	Units Used to Determine Cost Resp.	Remarks
		Type	Size/Pole No.				ON	OFF				

Virginia Department of Transportation

Appendix No. 5
UT-4
Revised 3-30-16

Date

To: (Appropriate Regional Utilities Manager)

_____

_____

SUBJECT: Project_____

PPMS _____

Utility Owner_____

Dear (Name):

In reply to your letter of_____confirming the utility field inspection held on the above-noted project, which is scheduled to be advertised on_____, we wish to inform you that the conditions checked in the box below apply:

☐1. It is necessary to adjust our existing facilities at project cost. A Plan and Estimate will be prepared and will be ready for submittal on or before:_____

☐2. It is necessary to adjust our existing facilities at no cost to the project. Three sets of relocation plans will be submitted on or before:_____

☐3. It is necessary to install new facilities on this project. Three sets of plans providing for the new installation will be submitted on or before:_____

☐4. It is expected to have all adjustment work and new work completed prior to the award of highway contract.

☐5. It is not expected to have all adjustment work and/or new work completed prior to the award of highway contract. Detailed information for work to be covered by a special provision will be submitted no later than:_____

☐6. Attachments to highway bridge structure(s) (has been) (will be) requested. Details of the attachment will be submitted by:_____

☐7. The State (has been) (will be) requested to acquire (replacement) (VDOT Utility) easements. Prior rights information and details of the proposed easement will be submitted by:____

☐8. It is desirable to have certain utility work included in the highway contract to be performed by the highway contractor. (See Chapter 10 of the Utility Relocation Policies and Procedures Manual). Preliminary plans and specifications of this work will be submitted on or before:_____

Final drawings will be submitted on or before:_____

☐9. The relocation or adjustment of our facilities will not affect the navigable waters or wetland areas.

☐10. We are forwarding required navigable water and wetland permit information to be included with the Virginia Department of Transportation permit application.

☐11. We will make application for the necessary navigable water and wetland permit.

Sincerely,

Name: _____
Title: _____

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Virginia Department of Transportation

Appendix No. 6
Revised 3-30-16

EXAMPLE LETTER - UTILITY OWNER REQUEST TO USE CONSULTANT FOR RELOCATION WORK TO BE PERFORMED UNDER A PLAN AND ESTIMATE

Project Number_____

County _____

Date_____

Subject: Request to use consultant

To: (Appropriate Regional Utilities Manager)

In accordance with prior approval from_____, State Utilities and Property Manager, dated_____, we request permission to use the firm of_____to perform engineering work outlined below:

(Provide a description of services to be provided)

The estimated fee for engineering services is $_____.

The cost incurred for engineering fees will be included in the relocation estimate and the established prorate for the relocation work contained in the estimate will be applied.

Sincerely,

Name_____

Title_____

Please submit on utility owner letterhead.

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Virginia Department of Transportation

Appendix No. 7
Revised 3-30-16

EXAMPLE LETTER - REQUEST BY UTILITY OWNER FOR
VDOT TO OBTAIN UTILITY EASEMENTS
DATE:

Project Number:_____

County/City:_____

Subject: Request for VDOT to obtain utility easements

To: (Appropriate Regional Utilities Manager)

In accordance with Chapter 7, Section 7.4 of the Utility Relocation Policies and Procedures Manual we request the Virginia Department of Transportation to act as agent for our company to secure utility easements which are necessary to expedite the relocation work required on the above reference project.

Enclosed please find a set of the transportation project plans with the required easements shown in red.

The easement instruments for replacement easements are enclosed for each landowner affected.

or

The easement instruments for replacement easements will be prepared for each landowner affected and submitted by (date).

or

VDOT Utility Easement is requested.

The proposed relocation (will or will not or partially) be a joint use facility.

-

The width of existing easements is (undefined or defined).

Our company agrees to bear its share of all applicable costs, if any, incurred for acquiring these easements.

Sincerely,

Name _____

Title _____

Please submit on utility owner letterhead.

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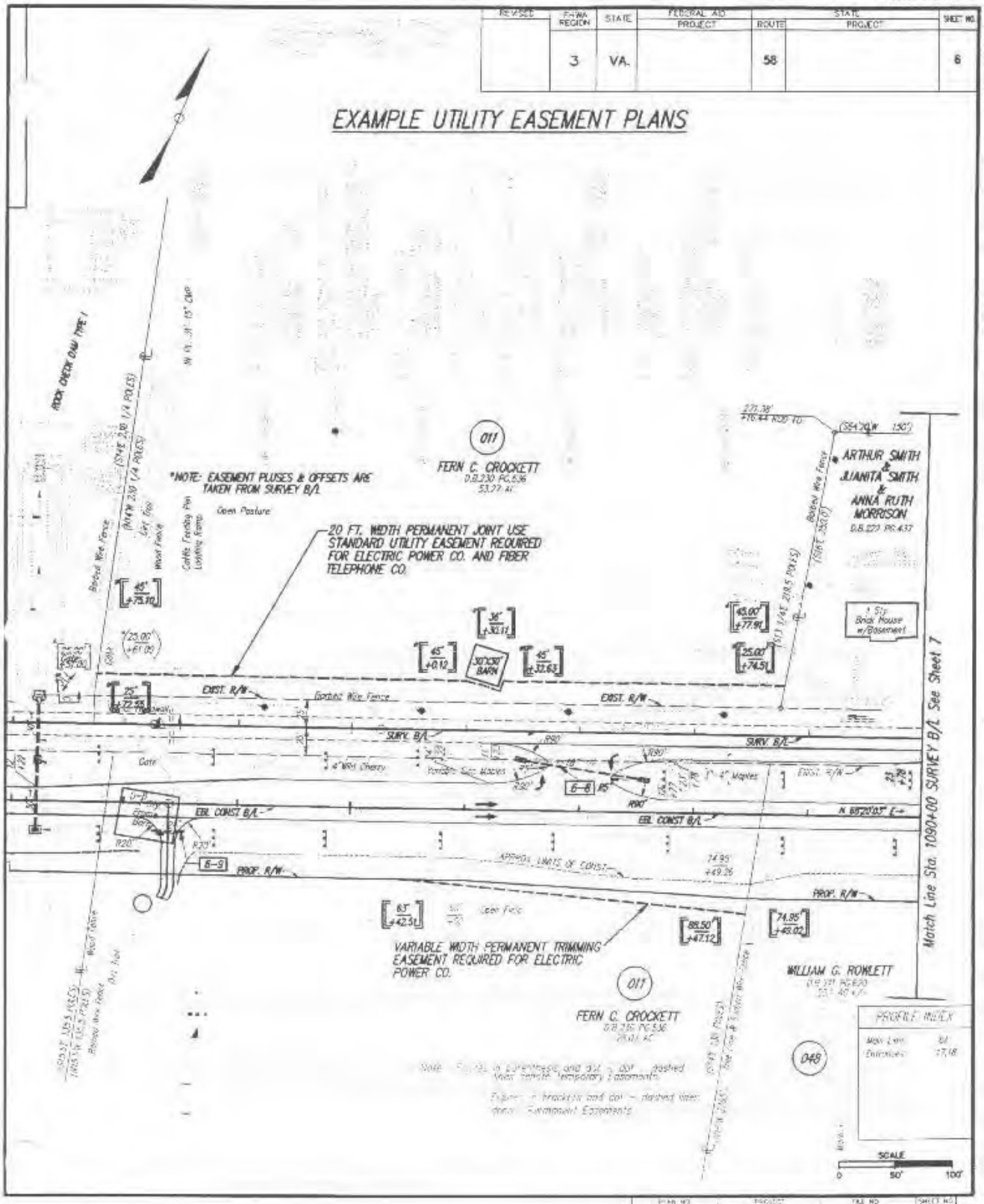
Appendix No. 11
Sheet 3 of 3

REVISED	FHWA REGION	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	3	VA.		58		6



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Virginia Department of Transportation

Appendix No. 8
Revised 3-30-16

Route_____
Project_____
Parcel(s)_____

UTILITY EASEMENT CHECKLIST TO BE SUBMITTED WITH R/W-24 REPORT WHEN IT IS NECESSARY TO FILE CERTIFICATE

I. An easement will be acquired for (1)_____
Name
_____
Address
_____

_____Joint Use

_____Existing Easement Verified (2)_____
Name
_____
Address
_____

II. VDOT Utility easement will be acquired for: (3)_____
(4)_____
(5)_____

III. Type of Proposed Facilities: (Identify Company by Number)
___Telephone,____Power,____Gas,____Water, _Sewer,____Other
___Aerial,____Underground

IV. Type of Easement: (Identify Company by Number)
_____Standard Easement (Telephone, Power) (Aerial or Underground)
_____Standard Easement (Water, Gas, Sewer)
_____Overhang, Trimming and Guying
_____Guying and Trimming
_____Other (Explain:_____)

V. Width of Proposed Easement:
_____Uniform_____Ft.
_____Variable

VI. Check all plats and plans for accuracy on BW print and initial and date RW-24 Report in margin.

TO THE BEST OF MY KNOWLEDGE, ALL UTILITY INFORMATION IS SHOWN CORRECTLY ON THE RW-24 REPORT, PLAT AND MARKED PRINTS AND IT AGREES WITH THE INFORMATION SHOWN ABOVE.

Date:_____ _____
Regional Utilities Manager

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Virginia Department of Transportation

Appendix No. 9
UT-11
Revised 3-30-16

UTILITY COST ESTIMATE FORMAT

Name of Utility Co._____Ut. Co. W.O. No._____
State Project No._____Date_____

			ESTIMATE	FINAL COST
A.	Engineering			
	1. Salaries		_____	_____
	2. Additives_____%	(_____) *Explain*	_____	_____
	3. Misc. Expenses	(_____) *Explain*	_____	_____
			_____	_____
		TOTAL	_____	_____
B.	Right of Way Acquisition			
	1. Salaries		_____	_____
	2. Additives_____%	(_____) *Explain*	_____	_____
	3. Misc. Expenses	(_____) *Explain*	_____	_____
			_____	_____
		TOTAL	_____	_____
C.	Construction (Permanent and Temporary)			
	1. Salaries *(Company)*		_____	_____
	2. Additives_____%	(_____) *Explain*	_____	_____
	3. Misc. Expenses	(_____) *Explain*	_____	_____
	4. Contract Labor Cost		_____	_____
	5. Material Cost *(Attach Itemize List)*		_____	_____
	6. Salvage Credit *(Attach Itemize List)*		(_____)	(_____)
	7. Handling Charges, Supply Expenses, Etc.		_____	_____
	8. Equipment		_____	_____
	9. Other Expenses Not Provided for Above _____			
		TOTAL	_____	_____
D.	General Engineering, Supervising, Accounting, Legal & Insurance			
E.	Total A, B, C, and D			_____
F.	Less Expired Service Life Credit *(Itemize)*		(_____)	(_____)
G.	Less Betterment Credit *(Itemize)*		(_____)	(_____)
H.	Total Nonbetterment Cost			_____
I.	Less Utility Company's Cost_____%			_____
J.	Total Estimated State Cost_____%		_____	_____

ESTIMATE APPROVED BY:_____ DATE:_____
SIGNED:_____ DATE:_____
TITLE:_____

Estimate to be submitted with plans, narrative statement, contract work request (if applicable), work schedule and real property interest documentation. (See plan and estimate check list Appendix 21 concerning all needed information with plan and estimate).

If temporary work is required, provide a separate list itemizing material to be installed and removed.

Virginia Department of Transportation

Appendix No. 10
Revised 3-30-16

EXAMPLE
NARRATIVE STATEMENT

Estimate No._____
Project No._____
Route No._____
Date_____

Sheet 1. Between stations 102+50 and 115+00 existing 3-phase power line is in conflict. We propose to relocate this facility beginning right of station 101+00 to 108+00 right, then crossing the project station 108+00, then left from station 108+00 to an existing pole left of station 115+75. The existing wire consists of 3-#2 ACSR primary and 1-#4 ACSR neutral. We propose to install 3-#4/0 AL primary and 1-#1/0 AL Neutral conductors for which betterment credit will be allowed in the estimate.

Sheet 2. A single-phase power line crosses the project at station 138+00. Due to proposed fill of approximately 15 meters in the roadway an underground crossing is proposed. It has been determined to be the most feasible method of relocation due to the buildings on each side of the project, which would require removal to accommodate any other proposal to relocate. The existing 2-#2 AL conductors will be replaced with comparable size conductors. The ducts will be 100 millimeters galvanized. Two required ducts plus one spare duct is proposed. In order to accomplish this relocation VDOT's contractor will be required to place approximately 3 meters of fill to an elevation of 832 and then allow the power company to install the ducts for the underground crossing. After the fill is established it will take approx. (4) four workdays to install the crossing. The project contractor should notify our company (10) days prior to the anticipated date the fill will be completed to allow our company to make arrangements to have the work completed.

Sheet 3. A single phase power line between Stations 158+00 and 166+00 will be relocated on VDOT right of way beginning at a pole located right of station 158+50 and ending at a pole right of station 166+40. The existing 2-#2 AL conductors will be replaced with same size conductors. Rock holes are anticipated through this heavily developed area, which will impact the labor and equipment cost of the relocation. The increased labor and equipment cost is reflected in the estimate.

Sheet 4. A crossing located at station 172+00 will require relocation due to a proposed fill in the roadway. The Crossing will be shifted east to approximate station 179+00. The existing 2-#2 Al conductors will be replaced with same size conductors.

Poles required to accomplish the relocation required by this project will be sized to meet the requirements of the project for which betterment is not allowed.

All poles proposed on sheets 1, 2 and 4 will be installed on private easements being acquired by VDOT.

Crossings over the proposed road way will have a minimum clearance of 6.4 meters.

(WHEN RELOCATION INVOLVES OTHER TYPE UTILITY FACILITIES THE PROPER SUBSTITUTION IS TO BE MADE FOR POWER FACILITIES GIVEN IN THIS EXAMPLE AND DESCRIBED AS APPROPRIATE FOR THE UTILITY BEING RELOCATED AND THE PARTICULAR TRANSPORTATION PROJECT)

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Virginia Department of Transportation

Appendix No. 11
Revised 3-30-16

EXAMPLE WORK SCHEDULE

Project_____will be advertised for construction by VDOT on____(Date)

_____with construction to commence in___(Month)_____.

Since it is VDOT's requirement to have the utility relocation performed prior to project advertisement, (Name of Utility Owner)_____will schedule to start the relocation work approximately (Number)_____days after authorization. It will take approximately (Number)_____ days to complete the work.

Actual completion of the utility relocation work (will or will not) be dependent upon coordination of our work with VDOT's project construction.

If actual completion of utility work is dependent upon coordination with VDOT construction please provide detail of the work to be performed and areas of the project affected.

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Appendix No. 12
Revised 3-30-16

ACCEPTABLE STANDARDIZED ALUMINUM POWER CONDUCTORS REGULARLY PRODUCED AND COMMONLY USED
These basic charts shall be used as a guide to determine betterment.

Standard ACSR or Aluminum Alloy Aerial Conductors	Aerial Conductors that may be replaced without betterment
1/0	#4 & #2 ACSR/Alu. Alloys #4, #6, & #8 Cu/ACWC #1/0 ACSR/Alu. Alloys #1 & #2 Cu/ACWC
#4/0	#2/0, #3/0 & #4/0 ACSR/Alu. Alloys #1/0, #2/0 & #3/0 Cu.
#336	#336 ACSR/Alu. Alloys #4/0 Cu.
#477	#477 ACSR/Alu.Alloys

Standard Triplex Conductors	Conductor Sizes that may be replaced without betterment
#2	#4 & #2 ACSR/Alu.Alloys #4, #6, & #8 Cu/ACWC*
#1/0	#1/0 ACSR/Alu.Alloys #1 & #2 Cu/ACWC
#4/0	#2/0, #3/0 & #4/0 ACSR/Alu.Alloys #1/0, #2/0 & #3/0 Cu.

Standard Quadriplex Conductors	Conductor Sizes that may be replaced without betterment
#1/0	#4, #2, & #1/0 SCSR/Alu.Alloys #4, #6, #8, #1 & #2 Cu/ACWC
#4/0	#2/0, #3/0 & #4/0 ACSR/Alu. Alloys

*1/0 triplex may be used to replace these conductors when used as secondary conductor.

NOTES:

(1) If a power company's standard conductor size exceeds the acceptable standard replacement conductor, betterment credit will be required between the cost of the acceptable standard and the company's standard. EXAMPLE - The existing conductor is #4ACSR. The acceptable standard replacement conductor is 1/0ACSR/Alu.Alloy. The company's standard conductor is 2/0 ACSR. If the company elects to use 2/0 ACSR, betterment credit will be required between the cost of the 1/0 and 2/0 ACSR conductors. Computations should be based on conductors having the same composition.

(2) If a company elects to use larger conductors that exceed acceptable replacement standards, betterment credit will also be required for the additional labor, equipment and larger appurtenances required to install and support the larger conductors. Unless, however, a company can sufficiently prove and document that there will be no such additional costs incurred.

(3) If a power company claims they can install their larger standardized conductor more economically than the acceptable standard replacement conductor, sufficient computations will be required to prove and support such claims.

(4) 35KV insulators and line equipment (cutouts, etc.) are accepted as standard non-betterment replacement items for existing insulators and line equipment with lesser voltage ratings.

(5) Betterment credit will not be required when it is clearly shown that larger conductors are necessary to accommodate highway construction.

(6) Where existing underground conductors are replaced with larger underground conductors having more current carrying capacity, betterment will be required.

(7) Where existing aerial conductors are replaced with underground conductors, sizing of the underground conductor may be increased without betterment to obtain a current carrying capacity comparable to the existing aerial conductor. Betterment credit is required when larger than necessary conductors are used.

(8) Special conductors such as tree cable or pre-assembled (bundled) aerial cable will be considered on an individual basis when encountered.

(9) Very large conductors are not listed because they are not frequently involved. Conductors not listed will be considered on an individual basis using the betterment principle "Increase in functional capacity" as the basic criteria.

(10) Expired service life credit is <u>not</u> required when betterment is involved.

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Virginia Department of Transportation

Appendix No. 13
Revised 3-30-16

ACCEPTABLE STANDARDIZED TELEPHONE CABLE SIZES REGULARLY PRODUCED AND COMMONLY USED

These sizes shall be used as a guide to determine betterment.

25 Pair	900 Pair
50 Pair	1200 Pair
100 Pair	1500 Pair
200 Pair	1800 Pair
300 Pair	2100 Pair
400 Pair	2400 Pair
600 Pair	2700 Pair

NOTICES:

(1) If a Telephone Company's standard cable size exceeds the acceptable standard replacement cable, betterment credit will be required between the cost of the acceptable standard and the Company's standard. EXAMPLE - The existing cable is 25 pair. The acceptable standard replacement cable is a 25 pair. If the Telephone Company elects to place a 50 pair, betterment credit will be required between the 25 pair and the 50 pair cable.

(2) Betterment credit will not be required when there are two or more existing cables involved which can be replaced by one cable and the replacement cable is either equal to or the next acceptable standard size above the total existing pairs. EXAMPLE - There are three existing cables with a total of 275 pair. a 300 pair cable may be installed as the next acceptable size without betterment. However, if a company's standard is a 400 pair cable, and elects to install a 400 pair in lieu of a 300 pair, betterment credit will be required between the 300 pair and 400 pair cable.

(3) Whenever larger cables are used which exceed acceptable replacement standards, betterment credit will also be required for the additional construction and splicing labor, equipment, hours, poles and larger appurtenances (anchor guys, etc) used to install and support the larger cables; unless, however, a company can sufficiently prove and document there will be no such additional costs incurred.

(4) Betterment computations shall be based on comparable gauge and composition.

(5) If due to highway construction or industry requirements, the size, gauge or composition of the proposed cable has to be changed and upgraded to maintain existing transmission quality, betterment credit is not required. This must be sufficiently supported and documented.

(6) A change from aerial to underground facility is not considered betterment unless increased in size or the Department determines an underground facility impracticable and too costly to resolve the conflict.

(7) Where specialized equipment or cables are encountered and any involve betterment, such cases will be resolved individually.

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Virginia Department of Transportation

Appendix No. 14
Revised 3-30-16

EXAMPLE LETTER -UTILITY OWNER SUBMISSION OF PLAN AND ESTIMATE TO VDOT

DATE:

Project Number:_____
County/City:_____

To: (Appropriate Regional Utilities Manager)

In connection with the relocation of utility facilities for the above referenced project we are submitting for your approval a plan and estimate and associated attachments as checked below.

- ☐ Real property interest documentation.
- ☐ Narrative statement.
- ☐ Work Schedule.
- ☐ Request to use contract forces.

The relocation is_____% VDOT expense.

The estimated non-betterment cost is $_____.

Sincerely,

Name_____

Title_____

Please submit on utility owner letterhead

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Virginia Department of Transportation

Appendix No. 15
Revised 3-30-16

PLAN AND ESTIMATE CHECK LIST

Utility Owner_____Estimate Amount:_____
Project_____Utility Co. Share_____
UPC_____VDOT Share_____

(Indicate yes, no, or n/a in space provided by each item)

( ) 1. Check Form UT-9 to determine responsibility of payment. Does it agree with utility plans and estimate?
( ) 2. Does permit inventory (LUPS) show any new facilities which have been installed?
( ) 3. Is there a narrative statement describing existing and proposed facilities?
( ) 4. Do plans show existing and proposed right of way lines?
( ) 5. Are utilities referenced to road plan stations?
( ) 6. Do plans contain legend?
( ) 7. Do plans show existing and proposed utility facilities?
( ) 8. Is temporary work necessary?
( ) 9. Does proposed adjustment conflict with road construction or other utility adjustments?
( ) 10. Is special provision necessary?
( ) 11. Are profiles or cross sections of proposed crossings included?
( ) 12. Has proposed adjustment been checked with all highway plan revisions?
( ) 13. Does plan and estimate include only state responsibility portion of adjustment?
( ) 14. Does plan and estimate include total adjustment with State's responsibility pro-rated?
( ) 15. Do estimate and plan quantities agree?
( ) 16. In your opinion, do plans show most practical and economical adjustment?
( ) 17. Do plans show betterment?
( ) 18. Is betterment credit allowed in estimate? Check breakdown.
( ) 19. Conduit:
  ( ) a. Is underground conduit proposed?
  ( ) b. Is there sufficient justification for number of ducts proposed?
  ( ) c. Are bridge attachments proposed?
( ) 20. In your opinion, does estimate show an unreasonable costs? (Engineering, right of way, material, force labor, contract labor, etc.) If "yes" explain in comments.
( ) 21. Is utility company requesting use of contract work?
Is request adequate? ( )
( ) 22. Does estimate provide sufficient salvage credit? Check breakdown.
( ) 23. Is work schedule included?
( ) 24. Interstate:
  ( ) a. Does adjustment generally conform to AASHTO Policy?
  ( ) b. Are proposed poles, anchors, manholes, etc., located within limited access right of way?
  ( ) c. If so, is there any alternative?
  ( ) d. Are aerial and underground crossings held to a minimum?
( ) 25. Primary:
  ( ) a. Are proposed facilities located on right of way?
  ( ) b. Is right of way 33.53 meters (110 feet) or over?
  ( ) c. Has utility signed comprehensive agreement?
  ( ) d. Are proposed facilities located according to agreement?
( ) 26. Is information on real property interest and/or rights included?
( ) 27. Are any environmental permits needed?
( ) 28. "MAP 21 Buy America Compliant" included?
( ).29. LIST ANY COMMENT REGARDING PLANS AND ESTIMATE ON BACK OF FORM.

BY_____ DATE_____

Copy of this check list should be maintained in the Regional Utilities Manager's file on each project. Copy to State Utilities and Property Manager with Plan & Estimate.

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Virginia Department of Transportation

Appendix No. 16
Revised 2-11-11

EXAMPLE LETTER - REQUEST BY UTILITY OWNER TO USE VDOT ON-CALL CONSULTANT AND TO INCLUDE RELOCATION IN VDOT CONTRACT

DATE:

Project Number:_____

County/City:_____

To: (Appropriate Regional Utilities Manager)

In accordance with Section 9.2 of the Utility Relocation Policies and Procedures Manual we make the following request:

1. Due to the lack of sufficient personnel and equipment to perform the preliminary engineering work, we request that (Name of VDOT on-call Consultant) VDOT's on-call utility design consultant be used to design the relocation of (Type of Utility Facilities) in conflict with the above referenced project.

2. We also request that the plans providing for the relocation of our facilities be incorporated into the project plans for the work to be performed by VDOT's project contractor.

We agree to bear our share of all applicable engineering and relocation costs based on the prorate that will be established for the relocation included in VDOT's contract.

Sincerely,

Name_____

Title_____

Note: The letter may be modified to request the general use of VDOT's on-call utility design consultant for all projects involving a utility owners facilities instead of a specific project.

Please submit request on utility owner letterhead.

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Virginia Department of Transportation

Appendix No. 17
Revised 3-30-16

EXAMPLE LETTER - REQUEST BY UTILITY OWNER TO USE PROPRIETARY MATERIALS FOR RELOCATION WORK

Date:

(Name)
State Hydraulics and Utilities Engineer
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Project Number:_____
County/City:_____

Dear (Name):

Utility facilities requiring relocation for the above referenced project are to be included in VDOT's project plans and contract for the work to be performed by VDOT's contractor. There are specific items of material required to facilitate the relocation that may be considered proprietary. Following is a list of these items:

(Provide a list of the items)

These items of material are compatible with the facilities which make up our existing system for which we stock parts to perform the required maintenance and repairs. The cost of stocking replacement parts for more than one product is cost prohibitive to us as owners of the facility and to our customers.

Sincerely,

Name_____
Title_____

Copy: Regional Utilities Manager

Please submit on utility owner letterhead

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Virginia Department of Transportation

Appendix No. 18
Revised 3-30-16

EXAMPLE LETTER - INCIDENTAL COSTS TO BE
INCURRED BY UTILITY OWNER IN CONNECTION WITH IN PLAN WORK

Date:

(Name)
State Utilities and Property Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Project Number:_____
County/City:_____

Dear (Name):

The following schedule provides a breakdown of estimated staff hours and costs associated with the engineering support, inspection services, field operation crews, and material to be furnished to the VDOT contractor on the captioned project.

(Provide a breakdown of hours and other incidental costs anticipated)

These are non-betterment incidental costs which will be incurred as a result of the relocation of our facilities found to be in conflict with your project. It is our understanding these costs will be made a part of the Utility Agreement for this project.

Sincerely,

Name_____

Title_____

Copy: Regional Utilities Manager

Please submit on utility owner letterhead

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Appendix No. 19
Revised 3-30-16

Virginia Department of Transportation

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 105.08 COOPERATION WITH REGARD TO UTILITIES
Utility Facility Adjustments Respectively Owned by:
Dominion Virginia Power Transmission, Electrical Transmission;
Dominion Virginia Power, Electric; Verizon Virginia, LLC, Telephone;
Windstream Communications, Telephone;
Level Iii Communications, Telephone;
Cox Communications, Cable; and Virginia Natural Gas

March 1, 2016
(FO)0264-122-108, C508

Section 105.08 Cooperation with Regard to Utilities of the Specifications is amended to include the following:

During the life of this project, the utility facilities owned and operated by Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications, and Virginia Natural Gas will be adjusted as necessary, either prior to project construction or in conjunction with project construction when necessary.

The Contractor shall not consider the description of the facilities contained herein or the description of the adjustments being made to these facilities as being inclusive of all facilities belonging to Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas on this project or all adjustments being made to these facilities.

The Bidder should consult Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas before submitting its' to determine the location of their existing facilities and to determine the extent of their adjustments which will be performed or be caused to be performed by the companies in conjunction with project construction.

The Contractor shall take all precautions necessary to prevent damaging the facilities belonging to Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas. If the Contractor's operations damage said facilities, the Contractor shall immediately notify the owner of the damaged utility. Any cost that may be incurred by the Contractor or the utility owner to repair the damaged facility shall be the responsibility of the Contractor in accordance with Section 107.17 of the Specifications.

The Contractor shall notify Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications, and Virginia Natural Gas through "Miss Utility" at 811 (1-800-552-3120) a minimum of 48 hours before beginning any excavation or construction on this project so that they can locate and mark their existing facilities.

Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications, and Virginia Natural Gas will adjust their overhead and underground facilities in conjunction with the Contractor's operations. The existing overhead and underground facilities with appurtenances are located throughout the project. The utility adjustments facilities will be phased into three utility phases and four construction areas. Utility Phase IA (Construction Area 1) utility adjustments begin approximately at I-64 construction base line Station 98+50 and end approximately at Sta. 138+60; and begin approximately at Ramp D7 construction base line Sta. 10+00 and end approximately at Sta. 22+95. Utility Phase IB (Construction Area 2) begin approximately at construction base line I-64 Sta. 139+85 and end approximately at Sta. 150+74; begin approximately at construction base line Ramp D7 Sta. 24+20 and end approximately at Sta. 58+00; begin approximately at construction base line Ramp D7 CD Sta. 10+00 and end approximately at Sta. 33+51; begin at construction base line I-264 approximate Sta. 18+41 and end approximately at Sta. 62+35; begin approximately at construction base line Ramp D7 Conn Sta. 300+00 and end approximately at Sta. 318+96; begin approximately at construction base line Ramp A Sta. 9+88 and end approximately at Sta. 13+41; and begin approximately at construction base line loop A Sta. 200+00 and end approximately at Sta. 204+14; and begin approximately at construction base line CD Conn Sta. 400+00 and end approximately at Sta. 415+37. Utility Phase IC (Construction Area 3) utility adjustments begin approximately at construction base line I-64 Sta. 138+60; and end approximately at Sta. 139+50 and begin at construction base line Ramp D7 approximate Sta. 22+95 and end approximately at Sta. 24+20. Utility Phase ID (Construction Area 4) utility relocation to be completed in Phase IB (Construction Area 4).

The Contractor shall limit its construction of the proposed improvements as out lined below.

Most of the work on joint use facilities must be performed sequentially and independently.

The following is a brief description of the utility facilities belonging to the named companies and the adjustments being made to these facilities.

Company contact information:

Dominion Virginia Power Transmission

The contact person for Dominion Virginia Power on this project is Mr. Kyle Keno, Telephone (804) 771-3548.
Dominion Virginia Power

The contact person for Dominion Virginia Power on this project is Mr. Bill Sleasman, 1600 Hamilton Avenue, Portsmouth, VA. 23707. Telephone (757) 393-3980.

Verizon Virginia, LLC

The contact person for Verizon Virginia, LLC on this project is Mr. Jim Fulton, 2920 Elmhurst Lane, Portsmouth, VA 23701. Telephone (757) 465-0379.

Windstream Communications

The contact person for Windstream Communications on this project is Mr. Jerry Richardson, 2134 W. Laburnum Avenue, Richmond, VA. 23227. Telephone (804) 422-4258.

Level III Communications

The contact person for Level III Communications on this project is Mr. Shawn Deyo, 3909A Carolina Avenue, Richmond, VA. 23222. Telephone (804) 289-7195.

Cox Communications

The contact person for Cox Communications on this project is Mr. Greg Patterson, 5200 Cleveland Street, Virginia Beach, VA. 23462. Telephone (757) 369-2859.

Virginia Natural Gas

The contact person for Virginia Natural Gas on this project is Mr. Michael Polson, 2700 Cromwell Drive, 2nd Floor, Norfolk, VA. 23509. Telephone (757) 857-2886.

Phase IA (Construction Area 1)

The Contractor shall not commence any construction of the proposed improvements within Utility Phase IA (Construction Area 1) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

The adjustment of the Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas facilities should be completed on or before June 28, 2016 within Utility Phase IA (Construction Area 1) but may be extended until these adjustments have been completed.

Dominion Virginia Power Transmission

Dominion Virginia Power Transmission does not own and or operate overhead or underground facilities within the areas scheduled for work in this phase.

Dominion Virginia Power

Dominion Virginia Power owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 3, 4 & 5.

Dominion Virginia Power will relocate their existing facilities:

- Both aerial and underground facilities along Newtown Road within approximately 1000 LF from the intersection with I-64.
- Aerial work on the East side of I64 in the area of Edison Avenue.

Verizon Virginia, LLC

Verizon Virginia, LLC owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 3, 4 & 5.

Verizon Virginia, LLC has been found not to be in conflict with this phase of the project.

Windstream Communications

Windstream Communications does not own and or operate any overhead or underground facilities within the project limits within this phase.

Level III Communications

Level III Communications does not own and or operate any overhead or underground facilities within the project limits within this phase.

Cox Communications

Cox Communications owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 3, 4 & 5.

Cox Communications has been found not to be in conflict with this phase of the project.

Virginia Natural Gas

Virginia Natural Gas owns and operates underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 3, 4 & 5.

Virginia Natural Gas will relocate their existing facilities along Newtown Road just East of the I-64 crossing.

The Contractor shall not commence any construction of the proposed improvements within Phase IA (Construction Area 1) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

Phase IB (Construction Area 2)

The Contractor shall not commence any construction of the proposed improvements within Utility Phase IB (Construction Area 2) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

The adjustment of the Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas facilities should be completed on or before April 24, 2017 within Utility Phase IB (Construction Area 2) but may be extended until these adjustments have been completed.

Dominion Virginia Power Transmission

Dominion Virginia Power Transmission does not own and or operate any overhead or underground facilities within the project limits within this phase.

Dominion Virginia Power

Dominion Virginia Power owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6, 7, 7D, 8, 8E & 8I.

Dominion Virginia Power will relocate their existing facilities both aerial and underground along the West side of Kempsville Road to resolve a conflict with the proposed pier protection at the crossing of I-264, as well as underground facilities within the intersection of Kempsville Road and Center Drive.

Verizon Virginia, LLC

Verizon Virginia, LLC owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6, 7, 7D, 8, 8E & 8I.

Verizon Virginia, LLC will relocate their existing facilities along the East side of Kempville Road to resolve a conflict with the proposed pier protection at the I-264 crossing.

Windstream Communications

Windstream Communications owns and operates underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheet 8.

Windstream Communications has been found not in conflict with this phase of the project.

Level III Communications

Level III Communications owns and operates underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheet 8.

Level III Communications will relocate their existing facilities crossing Kempville Road on the south side of Center Drive to the north side of Center Drive to resolve a conflict with the proposed pier protection and traffic signal the intersection of Kempville Road and Center Drive.

Cox Communications

Cox Communications owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6, 7, 7D, 8, 8E & 8I.

Cox Communications will relocate their existing facilities both aerial and underground along the West side of Kempsville Road to resolve a conflict with the proposed pier protection at the crossing of I-264, as well as underground facilities within the intersection of Kempsville Road and Center Drive.

Virginia Natural Gas

Virginia Natural Gas owns and operates underground facilities and appurtenances within areas scheduled for work during this phase. These facilities are shown on plan sheets 6, 7, 7D, 8, 8E & 8I.

Virginia Natural Gas has been found not to be in conflict with this phase of the project.

The Contractor shall not commence any construction of the proposed improvements within Phase IB (Construction Area 2) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

Phase IC (Construction Area 3)

The Contractor shall not commence any construction of the proposed improvements within Utility Phase IC (Construction Area 3) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

The adjustment of the Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas facilities should be completed on or before October 16, 2017 within Utility Phase IC (Construction Area 3) but may be extended until these adjustments have been completed.

Dominion Virginia Power Transmission

Dominion Virginia Power Transmission owns and operates overhead facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheet 6.

Dominion Virginia Power Transmission will relocate their existing facilities along the North side of Curlew Drive from approximately 500 LF West of the intersection of Kidd Boulevard and Curlew Drive to approximately 800 LF East of the Curlew crossing of I-64.

The Contractor shall exercise all due care so not to disturb the new facilities once the new Dominion Virginia Power Transmission facilities are in place and coordinate any work needed under the existing or proposed aerial transmission lines with the Dominion Virginia Power Transmission office. No additional payment will be considered for inspectors, shutdowns, or any other additional work or items needed expedite proposed roadway construction. Such costs, if needed, shall be the responsibility of the Contractor.

Dominion Virginia Power

Dominion Virginia Power owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6.

Dominion Virginia Power will relocate their existing facilities both underground and aerial work along Curlew Drive approximately from Sta. 601+00 to Sta. 606+25.

Verizon Virginia, LLC

Verizon Virginia, LLC owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6.

Verizon Virginia, LLC will relocate their existing facilities from aerial to underground along Curlew Drive from approximately I-264 to beyond the Easton Preschool entrance on the South side of Curlew. Special care will be needed during the installation of drainage STR 6-20 to STR 5-31 as well as during excavation for the bridge pier installation.

Windstream Communications

Windstream Communications does not own and or operate any overhead or underground facilities within the areas scheduled for work during this phase.

Level III Communications

Level III Communications does not own and or operate any overhead or underground facilities within the project limits within this phase.

Cox Communications

Cox Communications owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6.

Cox Communications will relocate their existing facilities along the Southern side of Curlew Drive from approximately Station 601+00 to approximately 606+25.

Virginia Natural Gas

Virginia Natural Gas owns and operates underground facilities and appurtenances within the areas scheduled for work during this phase. These facilities are shown on plan sheets 6.

Virginia Natural Gas has been found not to be in conflict with this phase of the project.

The Contractor shall not commence any construction of the proposed improvements within Phase IC (Construction Area 3) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

Phase ID (Construction Area 4)

The Contractor shall not commence any construction of the proposed improvements within Utility Phase ID (Construction Area 4) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

The adjustment of the Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications and Virginia Natural Gas facilities should be completed during the Utility Phase IB (Construction Area 2) on or before April 24, 2017 within Utility Phase ID (Construction Area 4) but may be extended until these adjustments have been completed.

Dominion Virginia Power Transmission

Dominion Virginia Power Transmission does not own and or operates any overhead or underground facilities within the project limits within this phase.

Dominion Virginia Power

Dominion Virginia Power owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase.

Dominion Virginia Power will relocate their existing facilities with Utility Phase ID (Construction Area 4) with the utility relocation in Utility Phase IB (Construction Area 2).

Verizon Virginia, LLC

Verizon Virginia, LLC owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase.

Verizon Virginia, LLC will relocate their existing facilities with Utility Phase ID (Construction Area 4) with the utility relocation in Utility Phase IB (Construction Area 2).

Windstream Communications

Windstream Communications owns and operates underground facilities and appurtenances within areas scheduled for work during this phase.

Windstream Communications will relocate their existing facilities with Utility Phase ID (Construction Area 4) with the utility relocation in Utility Phase IB (Construction Area 2).

Level III Communications

Level III Communications owns and operates overhead or underground facilities within the areas scheduled for work during this phase.

Level III Communications will relocate their existing facilities with Utility Phase ID (Construction Area 4) with the utility relocation in Utility Phase IB (Construction Area 2).

Cox Communications

Cox Communications owns and operates overhead and underground facilities and appurtenances within the areas scheduled for work during this phase.

Cox Communications will relocate their existing facilities with Utility Phase ID (Construction Area 4) with the utility relocation in Utility Phase IB (Construction Area 2).

The Contractor shall allow Cox Communications in Utility Phase ID (Construction Area 4) time to relocate their existing facilities from the Notice to Proceed date issued to the Contractor to complete their adjustment and remove their existing facilities. The Contractor shall not commence any construction of the proposed improvements within Phase ID (Construction Area 4) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

Virginia Natural Gas

Virginia Natural Gas owns and operates underground facilities and appurtenances within the areas scheduled for work during this phase.

Virginia Natural Gas will relocate their existing facilities with Utility Phase ID (Construction Area 4) with the utility relocation in Utility Phase IB (Construction Area 2).

The Contractor shall exercise all due care so not to disturb the new facilities once the new new or relocated facilities are in place.

The Contractor shall allow Dominion Virginia Power Transmission, Dominion Virginia Power, Verizon Virginia, LLC, Windstream Communications, Level III Communications, Cox Communications, and Virginia Natural Gas time to remove and relocate their existing facilities and to complete their adjustment their existing facilities in designated Utility Phase

The Contractor shall not commence any construction of the proposed improvements within Phase ID (Construction Area 4) of the project without the written approval of the Engineer and the Southeast Regional Utility Manager.

The Contractor should contact the affected utility companies prior to submission of his bid for this project to obtain more specific details of their existing and proposed facilities.

The Department is not responsible for any construction delays resulting from known utility adjustments and no modifications to the contract time limits will be considered for delays resulting from known utility adjustments.

Virginia Department of Transportation

Appendix No. 20
UT-7
Revised 3-30-16

VDOT
DAILY RECORD OF UTILITY WORK

Utility Co.:_____ Date:_____
State Project:_____ Federal Project:_____

Company Labor		Major Material Items		
Job Classification	Hours	Installed	Recovered	Condition
Company Equipment				
Type of Equipment	Hours			
		Remarks		
Contractors				
Name	Typ of Wk			

By:_____
Inspector

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Virginia Department of Transportation

Appendix No. 21
Revised 3-30-16

INFORMATION TO BE REFLECTED IN PROGRESS BILLINGS FROM UTILITY OWNERS

1. Utility Owner's Name and Address_____

2. Project No._____

3. Work Order No._____

4. TIN or SS No._____

5. Progress Bill No_____

6. Invoice should state that it is a "progress billing"

7. Total Amount Bill_____

8. Less Previous Progress Billings_____

9. Amount Due This Invoice_____

10. This billing covers cost accumulated from_____ to_____
(Date) (Date)

11. Affidavit
I certify that this billing is a true and fair bill for services performed and that to the best of my knowledge payment therefore has not been received.

Signed:_____
(Title)

*Notes Total progress billing shall not exceed 90% of the approved estimated project cost and shall be for a minimum of $1000.
Bill to be pro-rated in accordance with the approved estimate.
Costs shall be broken down to categorize, engineering, right of way, company labor, contract labor, equipment and etc. to be included with invoice.

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Virginia Department of Transportation

Appendix No. 22
Revised 3-30-16

INFORMATION TO BE REFLECTED IN FINAL BILLINGS FROM UTILITY OWNERS

1. Utility Owner's Name and Address_____
_____

2. Project No._____

3. Work Order No._____

4. TIN or SS No._____

5. Invoice should state that it is a "final billing".

6. Total Amount_____
(Total Amount must be substantiated by itemized breakdown of cost.)

7. Less Previous Progress Billings_____

8. Amount Due this Invoice_____
(To be prorated in accordance with approved estimate)

9. This billing covers cost accumulated from_____to_____
(Date) (Date)

10. Records and accounts supporting this billing may be audited at:
_____

11. Affidavit
I certify that this billing is a true and fair bill for services performed and that to the best of my knowledge payment therefore has not been received.

Signed:_____
(Title)

12. CERTIFICATION
This is to certify that the total amount of $(VDOT Share) indicated on this invoice represents the total actual nonbetterment costs incurred by us in the relocation and/or readjustment of that portion of our facilities on the above noted project which were determined to be VDOT expense. These had to be relocated and/or readjusted due to Transportation Project:(_____Project No._____) and the above amount is correct and proper for reimbursement. This work was authorized by letter dated_____to us from _____.

_____
(Utility Owner)
By:_____
(Authorized Representative)

13. CERTIFICATION
MAP-21 S.1518 BUY AMERICA Materials Certification

I certify that all of the materials, subject to the requirements of MAP-21 S.1518 BUY AMERICA, listed within the invoice(s) submitted, and installed along the subject project were purchased and manufactured in compliance with the BUY AMERICA statute guidelines.

_____
(Utility Owner)

By:_____
(Authorized Representative)

Virginia Department of Transportation

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PROGRESS BILLING CHECK LIST

Project No._____

Name of Utility Company_____

Amount of Estimate (VDOT Share)_____

Amount of Progress Billings to Date (VDOT Share)_____

Amount of Progress Billings this Invoice (VDOT Share)_____

Indicate yes, no, or n/a in space provided by each item

( ) 1. Does invoice should state Progress Billing Number (1, 2, 3, etc.)?

( ) 2. Has name and address of utility owner been shown?

( ) 3. Has TIN or SS Number of utility company been shown?

( ) 4. Who authorized work and when? By_____Date_____

( ) 5. Are starting and ending dates that costs were incurred shown on invoice?

( ) 6. Is cost responsibility prorate applied to billing?

( ) 7. Are there any previous billings? If yes, show amounts_____
(Total progress billings shall not exceed 90% of the estimated cost)

( ) 8. Has FD-AP-01 been signed?

( ) 9. Are correct number of copies of FD-AP-01 and attachments included?

( ) 10. Has affidavit been included?

( ) 11. Is bill coded correctly?

By:_____

Date:_____

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Virginia Department of Transportation

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FINAL BILLING CHECK LIST

Project No._____
Name of Utility Co. _____

Amount of Final Billing_____
Amount Previous Progress Billings_____
Total Relocation Cost_____
Amount of Approved Estimate _____
Amount of Overrun or Underrun _____

Indicate yes, no, or n/a in space provided by each item

( ) 1. Has invoice been date stamped to show receive date?

( ) 2. Does invoice state that it is a Final Billing?

( ) 3. Has name and address of utility company been shown?

( ) 4. Has TIN or SS Number been shown?

( ) 5. Who authorized work and when? By_____Date___

( ) 6. Are starting and completion dates shown on invoice?

( ) 7. Does final billing agree with the approved prorate?

( ) 8. Are previous progress billing numbers and amounts shown?

( ) 9. Has FD-AP-01 been signed?

( ) 10. Has correct number of copies of FD-AP-01 and attachments been included?

( ) 11. Has Affidavit been included?

( ) 12. Has permit application been received? Permit number if assigned_____

( ) 13. Has location of records and name of utility company official been shown on invoice?

( ) 14. Is FD-AP-01 coded correctly?

( ) 15. Does bill differ from estimate by more than 10% (Check individual category)?

( ) 16. Is overrun/underrun letter included?

( ) 17. If so, is explanation reasonable?

( ) 18. Is copy of Detail of Materials included? (Both installed and removed)

( ) 19. Does final bill material quantities agree with approved quantities?

( ) 20. Is non-betterment certification included?

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( ) 21. Has summary of Inspector's records, as-built plans or statement from Residency been included?

( ) 22. Is sufficient betterment allowed?

( ) 23. Has betterment credit been recalculated to reflect actual quantities and costs?

( ) 24. Is sufficient salvage credit allowed?

( ).25. Are there any materials with salvage value which have to be sold and the proceeds credited to the project?

( ) 26. Buy America Certification included?

( ) 27. Comments: _____

_____

By:_____ Date_____

Sec.
645.101 Purpose.
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[Code of Federal Regulations]
[Revised as of April 1, 2003]
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[CITE: 23CFR645]

TITLE 23--HIGHWAYS

CHAPTER I--FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

PART 645--UTILITIES--Table of Contents

Subpart A--Utility Relocations, Adjustments, and Reimbursement

Source: 50 FR 20345, May 15, 1985, unless otherwise noted.

Sec. 645.101 Purpose.

To prescribe the policies, procedures, and reimbursement provisions for the adjustment and relocation of utility facilities on Federal-aid and direct Federal projects.

Sec. 645.103 Applicability.

(a) The provisions of this regulation apply to reimbursement claimed by a State transportation department (STD) for costs incurred under an approved and properly executed transportation department (TD)/utility agreement and for payment of costs incurred under all Federal Highway Administration (FHWA)/utility agreements.

(b) Procedures on the accommodation of utilities are set forth in 23 CFR part 645, subpart B, Accommodation of Utilities.

(c) When the lines or facilities to be relocated or adjusted due to highway construction are privately owned, located on the owner's land, devoted exclusively to private use and not directly or indirectly serving the public, the provisions of the FHWA's right-of-way procedures in 23 CFR 710.203, apply. When applicable, under the foregoing conditions, the provisions of this regulation may be used as a guide to establish a cost-to-cure.

(d) The FHWA's reimbursement to the STD will be governed by State law (or State regulation) or the provisions of this regulation, whichever is more restrictive. When State law or regulation differs from this regulation, a determination shall be made by the STD subject to the

concurrence of the FHWA as to which standards will govern, and the record documented accordingly, for each relocation encountered.

(e) For direct Federal projects, all references herein to the STD or TD are inapplicable, and it is intended that the FHWA be considered in the relative position of the STD or TD.

[50 FR 20345, May 15, 1985, as amended at 64 FR 71289, Dec. 21, 1999]

Sec. 645.105 Definitions.

For the purposes of this regulation, the following definitions shall apply:

Authorization--for Federal-aid projects authorization to the STD by the FHWA, or for direct Federal projects authorization to the utility by the FHWA, to proceed with any phase of a project. The date of authorization establishes the date of eligibility for Federal funds to participate in the costs incurred on that phase of work.

Betterment--any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the utility.

Cost of relocation--the entire amount paid by or on behalf of the utility properly attributable to the relocation after deducting from that amount any increase in value of the new facility, and any salvage derived from the old facility.

Cost of Removal--the amount expended to remove utility property including the cost of demolishing, dismantling, removing, transporting, or otherwise disposing of utility property and of cleaning up to leave the site in a neat and presentable condition.

Cost of salvage--the amount expended to restore salvaged utility property to usable condition after its removal.

Direct Federal projects--highway projects such as projects under the Federal Lands Highways Program which are under the direct administration of the FHWA.

Indirect or overhead costs--those costs which are not readily identifiable with one specific task, job, or work order. Such costs may include indirect labor, social security taxes, insurance, stores expense, and general office expenses. Costs of this nature generally are distributed or allocated to the applicable job or work orders, other accounts and other functions to which they relate. Distribution and allocation is made on a uniform basis which is reasonable, equitable, and in accordance with generally accepted cost accounting practices.

Relocation--the adjustment of utility facilities required by the highway project. It includes removing and reinstalling the facility, including necessary temporary facilities, acquiring necessary right-of-way on the new location, moving, rearranging or changing the type of existing facilities and taking any necessary safety and protective measures. It shall also mean constructing a replacement facility that is both functionally equivalent to the existing facility and necessary for continuous operation of the utility service, the project economy, or sequence of highway construction.

Salvage value--the amount received from the sale of utility property that has been removed or the amount at which the recovered material is charged to the utility's accounts, if retained for reuse.

State transportation department--the transportation department of one of the 50 States, the District of Columbia, or Puerto Rico.

Transportation department(TD)--that department, commission, board, or official of any State or political subdivison thereof, charged by its law with the responsibility for highway administration.

Use and occupancy agreement--the document (written agreement or permit) by which the TD approves the use and occupancy of highway right-of-way by utility facilities or private lines.

Utility--a privately, publicly, or cooperatively owned line, facility or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public. The term utility shall also mean the utility company inclusive of any wholly owned or controlled subsidiary.

Work order system--a procedure for accumulating and recording into separate accounts of a utility all costs to the utility in connection with any change in its system or plant.

[50 FR 20345, May 15, 1985, as amended at 65 FR 70311, Nov. 22, 2000]

Sec. 645.107 Eligibility.

(a) When requested by the STD, Federal funds may participate, subject to the provisions of Sec. 645.103(d) of this part and at the pro rata share applicable, in an amount actually paid by an TD for the costs of utility relocations. Federal funds may participate in safety corrective measures made under the provisions of Sec. 645.107(k) of this part. Federal funds may also participate for **r**elocations necessitated by the actual construction of highway project made under one or more of the following conditions when:

(1) The STD certifies that the utility has the right of occupancy in its existing location because it holds the fee, an easement, or other real property interest, the damaging or taking of which is compensable in eminent domain,

(2) The utility occupies privately or publicly owned land, including public road or street right-of-way, and the STD certifies that the payment by the TD is made pursuant to a law authorizing such payment in conformance with the provisions of 23 U.S.C. 123, and/or

(3) The utility occupies publicy owned land, including public road and street right-of-way, and is owned by a public agency or political subdivision of the State, and is not required by law or agreement to move at its own expense, and the STD certifies that the TD has the legal authority or obligation to make such payments.

(b) On projects which the STD has the authority to participate in project costs, Federal funds may not participate in payments made by a political subdivision for relocation of utility facilities, other than those proposed under the provisions of Sec. 645.107(k) of this part, when State law prohibits the STD from making payment for relocation of utility facilities.

(c) On projects which the STD does not have the authority to participate in project costs, Federal funds may participate in payments made by a political subdivision for relocation of utility facilities necessitated by the actual construction of a highway project when the STD certifies that such payment is based upon

the provisions of Sec. 645.107(a) of this part and does not violate the terms of a use and occupancy agreement, or legal contract, between the utility and the TD or for utility safety corrective measures under the provisions of Sec. 645.107(k) of this part.

(d) Federal funds are not eligible to participate in any costs for which the utility contributes or repays the TD, except for utilities owned by the political subdivision on projects which qualify under the provisions of Sec. 645.107(c) of this part in which case the costs of the utility are considered to be costs of the TD.

(e) The FHWA may deny Federal fund participation in any payments made by a TD for the relocation of utility facilities when such payments do not constitute a suitable basis for Federal fund participation under the provisions of title 23 U.S.C.

(f) The rights of any public agency or political subdivision of a State under contract, franchise, or other instrument or agreement with the utility, pertaining to the utility's use and occupancy of publicly owned land, including public road and street right-of-way, shall be considered the rights of the STD in the absence of State law to the contrary.

(g) In lieu of the individual certifications required by Sec. 645.107(a) and (c), the STD may file a statement with the FHWA setting forth the conditions under which the STD will make payments for the relocation of utility facilities. The FHWA may approve Federal fund participation in utility relocations proposed by the STD under the conditions of the statement when the FHWA has made an affirmative finding that such statement and conditions form a suitable basis for Federal fund participation under the provisions of 23 U.S.C. 123.

(h) Federal funds may not participate in the cost of relocations of utility facilities made solely for the benefit or convenience of a utility, its contractor, or a highway contractor.

(i) When the advance installation of new utility facilities crossing or otherwise occupying the proposed right-of-way of a planned highway project is underway, or scheduled to be underway, prior to the time such right-of-way is purchased by or under control of the TD, arrangements should be made for such facilities to be installed in a manner that will meet the requirements of the planned highway project. Federal funds are eligible to participate in the additional cost incurred by the utility that are attributable to, and in accommodation of, the highway project provided such costs are incurred subsequent to authorization of the work by the FHWA. Subject to the other provisions of this regulation, Federal participation may be approved under the foregoing circumstances when it is demonstrated that the action taken is necessary to protect the public interest and the adjustment of the facility is necessary by reason of the actual construction of the highway project.

(j) Federal funds are eligible to participate in the costs of preliminary engineering and allied services for utilities, the acquisition of replacement right-of-way for utilities, and the physical construction work associated with utility relocations. Such costs must be incurred by or on behalf of a utility after the date the work is included in an approved program and after the FHWA has authorized the STD to proceed in accordance with 23 CFR part 630, subpart A, Federal-Aid Programs Approval and Project Authorization.

(k) Federal funds may participate in projects solely for the purpose of implementing safety corrective measures to reduce the roadside hazards of utility facilities to the highway user. Safety corrective measures should be developed in accordance with the provisions of 23 CFR 645.209(k).

(Information collection requirements in paragraph (g) were approved by the Office of Management and Budget under control number 2125-0515)

[50 FR 20345, May 15, 1985, as amended at 53 FR 24932, July 1, 1988]

Sec. 645.109 Preliminary engineering.

(a) As mutually agreed to by the TD and utility, and subject to the provisions of paragraph (b) of this section, preliminary engineering activities associated with utility relocation work may be done by:

(1) The TD's or utility's engineering forces;

(2) An engineering consultant selected by the TD, after consultation with the utility, the contract to be administered by the TD; or,

(3) An engineering consultant selected by the utility, with the approval of the TD, the contract to be administered by the utility.

(b) When a utility is not adequately staffed to pursue the necessary preliminary engineering and related work for the utility relocation, Federal funds may participate in the amount paid to engineers, architects, and others for required engineering and allied services provided such amounts are not based on a percentage of the cost of relocation. When Federal participation is requested by the STD in the cost of such services, the utility and its consultant shall agree in writing as to the services to be provided and the fees and arrangements for the services. Federal funds may participate in the cost of such services performed under existing written continuing contracts when it is demonstrated that such work is performed regularly for the utility in its own work and that the costs are reasonable.

(c) The procedures in 23 CFR part 172, Administration of Engineering and Design Related Service Contracts, may be used as a guide for reviewing proposed consultant contracts.

[50 FR 20345, May 15, 1985, as amended at 60 FR 34850, July 5, 1995; 65 FR 70311, Nov. 22, 2000]

Sec. 645.111 Right-of-way.

(a) Federal participation may be approved for the cost of replacement right-of-way provided:

(1) The utility has the right of occupancy in its existing location beause it holds the fee, an easement, or another real property interest, the damaging or taking of which is compensable in eminent domain, or the acquisition is made in the interest of project economy or is necessary to meet the requirements of the highway project, and

(2) There will be no charge to the project for that portion of the utility's existing right-of-way being transferred to the TD for highway purposes.

(b) The utility shall determine and make a written valuation of the replacement right-of-way that it acquires in order to justify amounts paid for such right-of-way. This written valuation shall be accomplished prior to negotiation for acquisition.

(c) Acquisition of replacement right-of-way by the TD on behalf of a utility or acquisition of nonoperating real property from a utility shall be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. 4601 et seq.) and applicable right-of-way procedures in 23 CFR 710.203.

(d) When the utility has the right-of-occupancy in its existing location because it holds the fee, an easement, or another real property interest, and it is not necessary by reason of the highway construction to adjust or replace the facilities located thereon, the taking of and damage to the utility's real property, including the disposal or removal of such facilities, may be considered a right-of-way transaction in accordance with provisions of the applicable right-of-way procedures in 23 CFR 710.203.

[50 FR 20345, May 15, 1985, as amended at 64 FR 71289, Dec. 21, 1999]

Sec. 645.113 Agreements and authorizations.

(a) On Federal-aid and direct Federal projects involving utility relocations, the utility and the TD shall agree in writing on their separate responsibilities for financing and accomplishing the relocation work. When Federal participation is requested, the agreement shall incorporate this regulation by reference and designate the method to be used for performing the work (by contract or force account) and for developing relocation costs. The method proposed by the utility for developing relocation costs must be acceptable to both the TD and the FHWA. The preferred method for the development of relocation costs by a utility is on the basis of actual direct and related indirect costs accumulated in accordance with a work order accounting procedure prescribed by the applicable Federal or State regulatory body.

(b) When applicable, the written agreement shall specify the terms and amounts of any contribution or repayments made or to be made by the utility to the TD in connection with payments by the TD to the utility under the provisions of Sec. 645.107 of this regulation.

(c) The agreement shall be supported by plans, specifications when required, and itemized cost estimates of the work agreed upon, including appropriate credits to the project, and shall be sufficiently informative and complete to provide the TD and the FHWA with a clear description of the work required.

(d) When the relocation involves both work to be done at the TD's expense and work to be done at the expense of the utility, the written agreement shall state the share to be borne by each party.

(e) In the event there are changes in the scope of work, extra work or major changes in the planned work covered by the approved agreement, plans, and estimates, Federal participation shall be limited to costs covered by a modification of the agreement, a written change, or extra work order approved by the TD and the FHWA.

(f) When proposed utility relocation and adjustment work on a project for a specific utility company can be clearly defined and the cost can be accurately estimated, the FHWA may approve an agreement between the TD and the utility company for a lump-sum payment without later confirmation by audit of actual costs.

(g) Except as otherwise provided by Sec. 645.113(h), authorization by the FHWA to the STD to proceed with the physical relocation of a utility's facilities may be given after:

(1) The utility relocation work, or the right-of-way, or physical construction phase of the highway construction work is included in an approved Statewide transportation improvement program,

(2) The appropriate environmental evaluation and public hearing procedures required by 23 CFR part 771, Environmental Impact and Related Procedures, have been satisfied.

(3) The FHWA has reviewed and approved the plans, estimates, and proposed or executed agreements for the utility work and is furnished a schedule for accomplishing the work.

(h) The FHWA may authorize the physical relocation of utility facilities before the requirements of Sec. 645.113(g)(2) are satisfied when the relocation or adjustment of utility facilities meets the requirements of Sec. 645.107(i) of this regulation.

(i) Whenever the FHWA has authorized right-of-way acquisition under the hardship and protective buying provisions of 23 CFR 710.503, the FHWA may authorize the physical relocation of utility facilities located in whole or in part on such right-of-way.

(j) When all efforts by the TD and utility fail to bring about written agreement of their separate responsibilities under the provisions of this regulation, the STD shall submit its proposal and a full report of the circumstances to the FHWA. Conditional authorizations for the relocation work to proceed may be given by the FHWA to the STD with the understanding that Federal funds will not be paid for work done by the utility until the STD proposal has been approved by the FHWA.

(k) The FHWA will consider for approval any special procedure under State law, or appropriate administrative or judicial order, or under blanket master agreements with the utilities, that will fully accomplish all of the foregoing objectives and accelerate the advancement of the construction and completion of projects.

[50 FR 20345, May 15, 1985, as amended at 60 FR 34850, July 5, 1995; 64 FR 71289, Dec. 21, 1999; 65 FR 70311, Nov. 22, 2000]

Sec. 645.115 Construction.

(a) Part 635, subpart B, of this title, Force Account Construction (justification required for force account work), states that it is cost-effective for certain utility adjustments to be performed by a utility with its own forces and equipment, provided the utility is qualified to perform the work in a satisfactory manner. This cost-effectiveness finding covers minor work on the utility's existing facilities routinely performed by the utility with its own forces. When the utility is not adequately staffed and equipped to perform such work with its own forces and equipment at a time convenient to and in coordination with the associated highway construction, such work may be done by:

(1) A contract awarded by the TD or utility to the lowest qualified bidder based on appropriate solicitation,

(2) Inclusion as part of the TD's highway construction contract let by the TD as agreed to by the utility,

(3) An existing continuing contract, provided the costs are reasonable, or

(4) A contract for low-cost incidental work, such as tree trimming and the like, awarded by the TD or utility without competitive bidding, provided the costs are reasonable.

(b) When it has been determined under part 635, subpart B, that the force account method is not the most cost-effective means for accomplishing the utility adjustment, such work is to be done under competitive bid contracts as described in Sec. 645.115(a) (1) and (2) or under an existing continuing contract provided it can be demonstrated this is the most cost-effective method.

(c) Costs for labor, materials, equipment, and other services furnished by the utility shall be billed by the utility directly to the TD. The special provisions of contracts let by the utility or the TD shall be explicit in this respect. The costs of force account work performed for the utility by the TD and of contract work performed for the utility under a contract let by the TD shall be reported separately from the costs of other force account and contract items on the highway project.

Sec. 645.117 Cost development and reimbursement.

(a) Developing and recording costs.

(1) All utility relocation costs shall be recorded by means of work orders in accordance with an approved work order system except when another method of developing and recording costs, such as lump-sum agreement, has been approved by the TD and the FHWA. Except for work done under contracts, the individual and total costs properly reported and recorded in the utility's accounts in accordance with the approved method for developing such costs, or the lump-sum agreement, shall constitute the maximum amount on which Federal participation may be based.

(2) Each utility shall keep its work order system or other approved accounting procedure in such a manner as to show the nature of each addition to or retirement from a facility, the total costs thereof, and the source or sources of cost. Separate work orders may be issued for additions and retirements. Retirements, however, may be included with the construction work order provided that all items relating to retirements shall be kept separately from those relating to construction.

(3) The STD may develop, or work in concert with utility companies to develop, other acceptable costing methods, such as unit costs, to estimate and reimburse utility relocation expenditures. Such other methods shall be founded in generally accepted industry practices and be reasonably supported by recent actual expenditures. Unit costs should be developed periodically and supported annually by a maintained data base of relocation expenses. Development of any alternate costing method should consider the factors listed in paragraphs (b) through (g) of this section. Streamlining of the cost development and reimbursement procedures is encouraged so long as adequate accountability for Federal expenditures is maintained. Concurrence by the FHWA is required for any costing method used other than actual cost.

(b) Direct labor costs.

(1) Salaries and wages, at actual or average rates, and related expenses paid by the utility to individuals for the time worked on the project are reimbursable when supported by adequate records. This includes labor associated with preliminary engineering, construction engineering, right-of-way, and force account construction.

(2) Salaries and expenses paid to individuals who are normally part of the overhead organization of the utility may be reimbursed for the time worked directly on the project when supported by adequate records and when the work performed by such individuals is essential to the project and could not have been accomplished as economically by employees outside the overhead organization.

(3) Amounts paid to engineers, architects and others for services directly related to projects may be reimbursed.

(c) Labor surcharges.

(1) Labor surcharges include worker compensation insurance, public liability and property damage insurance, and such fringe benefits as the utility has established for the benefit of its employees. The cost of labor surcharges will be reimbursed at actual cost to the utility, or, at the option of the utility, average rates which are representative of actual costs may be used in lieu of actual costs if approved by the STD and the FHWA. These average rates should be adjusted at least once annually to take into account known anticipated changes and correction for any over or under applied costs for the preceding period.

(2) When the utility is a self-insurer, there may be reimbursement at experience rates properly developed from actual costs. The rates cannot exceed the rates of a regular insurance company for the class of employment covered.

(d) Overhead and indirect construction costs.

(1) Overhead and indirect construction costs not charged directly to work order or construction accounts may be allocated to the relocation provided the allocation is made on an equitable basis. All costs included in the allocation shall be eligible for Federal reimbursement, reasonable, actually incurred by the utility, and consistent with the provisions of 48 CFR part 31.

(2) Costs not eligible for Federal reimbursement include, but are not limited to, the costs associated with advertising, sales promotion, interest on borrowings, the issuance of stock, bad debts, uncollectible accounts receivable, contributions, donations, entertainment, fines, penalties, lobbying, and research programs.

(3) The records supporting the entries for overhead and indirect construction costs shall show the total amount, rate, and allocation basis for each additive, and are subject to audit by representatives of the State and Federal Government.

(e) Material and supply costs.

(1) Materials and supplies, if available, are to be furnished from company stock except that they may be obtained from other sources near the project site when available at a lower cost. When not available from company stock, they may be purchased either under competitive bids or existing continuing contracts under which the lowest available prices are developed. Minor quantities of materials and supplies and proprietary products routinely used in the utility's operation and essential for the maintenance of system compatibility may be excluded from these requirements. The utility shall not be required to change its existing standards for materials used in permanent changes to its facilities. Costs shall be determined as follows:

(i) Materials and supplies furnished from company stock shall be billed at the current stock prices for such new or used materials at time of issue.

(ii) Materials and supplies not furnished from company stock shall be billed at actual costs to the utility delivered to the project site.

(iii) A reasonable cost for plant inspection and testing may be included in the costs of materials and supplies when such expense has been incurred. The computation of actual costs of materials and supplies shall include the deduction of all offered discounts, rebates, and allowances.

(iv) The cost of rehabilitating rather than replacing existing utility facilities to meet the requirements of a project is reimbursable, provided this cost does not exceed replacement costs.

(2) Materials recovered from temporary use and accepted for reuse by the utility shall be credited to the project at prices charged to the job, less a consideration for loss in service life at 10 percent. Materials recovered from the permanent facility of the utility that are accepted by the utility for return to stock shall be credited to the project at the current stock prices of such used materials. Materials recovered and not accepted for reuse by the utility, if determined to have a net sale value, shall be sold to the highest bidder by the TD or utility following an opportunity for TD inspection and appropriate solicitation for bids. If the utility practices a system of periodic disposal by sale, credit to the project shall be at the going prices supported by records of the utility.

(3) Federal participation may be approved for the total cost of removal when either such removal is required by the highway construction or the existing facilities cannot be abandoned in place for aesthetic or safety reasons. When the utility facilities can be abandoned in place but the utility or highway constructor elects to remove and recover the materials, Federal funds shall not participate in removal costs which exceed the value of the materials recovered.

(4) The actual and direct costs of handling and loading materials and supplies at company stores or material yards, and of unloading and handling recovered materials accepted by the utility at its stores or material yards are reimbursable. In lieu of actual costs, average rates, which are representative of actual costs, may be used if approved by the STD and the FHWA. These average rates should be adjusted at least once annually to take into account known anticipated changes and correction for any over or under applied costs for the preceding period. At the option of the utility, 5 percent of the amounts billed for the materials and supplies issued from company stores and material yards or the value of recovered materials will be reimbursed in lieu of actual or average costs for handling.

(f) Equipment costs. The average or actual costs of operation, minor maintenance, and depreciation of utility-owned equipment may be reimbursed. Reimbursement for utility-owned vehicles may be made at average or actual costs. When utility-owned equipment is not available, reimbursement will be limited to the amount of rental paid

(1) to the lowest qualified bidder,

(2) under existing continuing contracts at reasonable costs, or

(3) as an exception by negotiation when paragraph (f) (1) and (2) of this section are impractical due to project location or schedule.

(g) Transportation costs.

(1) The utility's cost, consistent with its overall policy, of necessary employee transportation and subsistence directly attributable to the project is reimbursable.

(2) Reasonable cost for the movement of materials, supplies, and equipment to the project and necessary return to storage including the associated cost of loading and unloading equipment is reimbursable.

(h) Credits.

(1) Credit to the highway project will be required for the cost of any betterments to the facility being replaced or adjusted, and for the salvage value of the materials removed.

(2) Credit to the highway project will be required for the accrued depreciation of a utility facility being replaced, such as a building, pumping station, filtration plant, power plant, substation, or any other similar operational unit. Such accrued depreciation is that amount based on the ratio between the period of actual length of service and total life expectancy applied to the original cost. Credit for accrued depreciation shall not be required for a segment of the utility's service, distribution, or transmission lines.

(3) No betterment credit is required for additions or improvements which are:

(i) Required by the highway project,

(ii) Replacement devices or materials that are of equivalent standards although not identical,

(iii) Replacement of devices or materials no longer regularly manufactured with next highest grade or size,

(iv) Required by law under governmental and appropriate regulatory commission code, or

(v) Required by current design practices regularly followed by the company in its own work, and there is a direct benefit to the highway project.

(4) When the facilities, including equipment and operating facilities, described in Sec. 645.117(h)(2) are not being replaced, but are being rehabilitated and/or moved, as necessitated by the highway project, no credit for accrued depreciation is needed.

(5) In no event will the total of all credits required under the provisions of this regulation exceed the total costs of adjustment exclusive of the cost of additions or improvements necessitated by the highway construction.

(i) Billings

(1) After the executed TD/utility agreement has been approved by the FHWA, the utility may be reimbursed through the STD by progress billings for costs incurred. Cost for materials stockpiled

at the project site or specifically purchased and delivered to the utility for use on the project may also be reimbursed on progress billings following approval of the executed TD/utility agreement.

(2) The utility shall provide one final and complete billing of all costs incurred, or of the agreed-to lump-sum, within one year following completion of the utility relocation work, otherwise previous payments to the utility may be considered final, except as agreed to between the STD and the utility. Billings received from utilities more than one year following completion of the utility relocation work may be paid if the STD so desires, and Federal-aid highway funds may participate in these payments.

(3) All utility cost records and accounts relating to the project are subject to audit by representatives of the State and Federal Government for a period of 3 years from the date final payment has been received by the utility**.**

(Information collection requirements in paragraph (i) were approved by the Office of Management and Budget under control number 2125-0159)

[50 FR 20345, May 15, 1985, as amended at 60 FR 34850, July 5, 1995; 65 FR 70311, Nov. 22, 2000]

Sec. 645.119 Alternate procedure.

(a) This alternate procedure is provided to simplify the processing of utility relocations or adjustments under the provisions of this regulation. Under this procedure, except as otherwise provided in paragraph (b) of this section, the STD is to act in the relative position of the FHWA for reviewing and approving the arrangements, fees, estimates, plans, agreements, and other related matters required by this regulation as prerequisites for authorizing the utility to proceed with and complete the work.

(b) The scope of the STD's approval authority under the alternate procedure includes all actions necessary to advance and complete all types of utility work under the provisions of this regulation except in the following instances:

(1) Utility relocations and adjustments involving major transfer, production, and storage facilities such as generating plants, power feed stations, pumping stations and reservoirs.

(2) Utility relocations falling within the scope of Sec. 645.113 (h), (i), and (j), and Sec. 645.107(i) of this regulation.

(c) To adopt the alternate procedure, the STD must file a formal application for approval by the FHWA. The application must include the following:

(1) The STD's written policies and procedures for administering and processing Federal-aid utility adjustments. Those policies and procedures must make adequate provisions with respect to the following:

(i) Compliance with the requirements of this regulation, except as otherwise provided by Sec. 645.119(b), and the provisions of 23 CFR part 645, subpart B, Accommodation of Utilities.

(ii) Advance utility liaison, planning, and coordination measures or providing adequate lead time and early scheduling of utility relocation to minimize interference with the planned highway construction.

(iii) Appropriate administrative, legal, and engineering review and coordination procedures as needed to establish the legal basis of the TD's payment; the extent of eligibility of the work under State and Federal laws and regulations; the more restrictive payment standards under Sec. 645.103(d) of this regulation; the necessity of the proposed utility work and its compatibility with proposed highway improvements; and the uniform treatment of all utility matters and actions, consistent with sound management practices.

(iv) Documentation of actions taken in compliance with STD policies and the provisions of this regulation, shall be retained by the STD.

(2) A statement signed by the chief administrative officer of the STD certifying that:

(i) Federal-aid utility relocations will be processed in accordance with the applicable provisions of this regulation, and the STD's utility policies and procedures submitted under Sec. 645.119(c)(1).

(ii) Reimbursement will be requested only for those costs properly attributable to the proposed highway construction and eligible for participation under the provisions of this regulation.

(d) The STD's application and any changes to it will be submitted to the FHWA for review and approval.

(e) After the alternate procedure has been approved, the FHWA may authorize the STD to proceed with utility relocation on a project in accordance with the certification, subject to the following conditions:

(1) The utility work must be included in an approved program.

(2) The STD must submit a request in writing for such authorization. The request shall include a list of the utility relocations to be processed under the alternate procedure, along with the best available estimate of the total costs involved.

(f) The FHWA may suspend approval of the alternate procedure when any FHWA review discloses noncompliance with the certification. Federal funds will not participate in relocation costs incurred that do not comply with the requirements under Sec. 645.119(c)(1).

(Information collection requirements in paragraph (c) were approved by the Office of Management and Budget under control number 2125-0533)

[50 FR 20345, May 15, 1985, as amended at 65 FR 70311, Nov. 22, 2000]

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[Code of Federal Regulations]
[Title 23, Volume 1]
[Revised as of April 1, 2003]
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TITLE 23--HIGHWAYS

CHAPTER I--FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

PART 645--UTILITIES--Table of Contents

Subpart B--Accommodation of Utilities

Source: 50 FR 20354, May 15, 1985, unless otherwise noted.

Sec. 645.201 Purpose.

To prescribe policies and procedures for accommodating utility facilities and private lines on the right-of-way of Federal-aid or direct Federal highway projects.

Sec. 645.203 Applicability.

This subpart applies to:

(a) New utility installations within the right-of-way of Federal-aid or direct Federal highway projects,

(b) Existing utility facilities which are to be retained, relocated, or adjusted within the right-of-way of active projects under development or construction when Federal-aid or direct Federal highway funds are either being or have been used on the involved highway facility. When existing utility installations are to remain in place without adjustments on such projects the transportation department and utility are to enter into an appropriate agreement as discussed in Sec. 645.213 of this part,

(c) Existing utility facilities which are to be adjusted or relocated under the provisions of Sec. 645.209(k), and

(d) Private lines which may be permitted to cross the right-of-way of a Federal-aid or direct Federal highway project pursuant to State law and regulations and the provisions of this subpart. Longitudinal use of such right-of-way by private lines is to be handled under the provisions of 23 CFR 1.23(c).

Sec. 645.205 Policy.

(a) Pursuant to the provisions of 23 CFR 1.23, it is in the public interest for utility facilities to be accommodated on the right-of-way of a Federal-aid or direct Federal highway project when such use and occupancy of the highway right-of-way do not adversely affect highway or traffic safety, or otherwise impair the highway or its aesthetic quality, and do not conflict with the provisions of Federal, State or local laws or regulations.

(b) Since by tradition and practice highway and utility facilities frequently coexist within common right-of-way or along the same transportation corridors, it is essential in such situations that these public service facilities be compatibly designed and operated. In the design of new highway facilities consideration should be given to utility service needs of the area traversed if such service is to be provided from utility facilities on or near the highway. Similarly the potential impact on the highway and its users should be considered in the design and location of utility facilities on or along highway right-of-way. Efficient, effective and safe joint highway and utility development of transportation corridors is important along high speed and high volume roads, such as major arterials and freeways, particularly those approaching metropolitan areas where space is increasingly limited. Joint highway and utility planning and development efforts are encouraged on Federal-aid highway projects.

(c) The manner is which utilities cross or otherwise occupy the right-of-way of a direct Federal or Federal-aid highway project can materially affect the highway, its safe operation, aesthetic quality, and maintenance. Therefore, it is necessary that such use and occupancy, where authorized, be regulated by transportation departments in a manner which preserves the operational safety and the functional and aesthetic quality of the highway facility. This subpart shall not be construed to alter the basic legal authority of utilities to install their facilities on public highways pursuant to law or franchise and reasonable regulation by transportation departments with respect to location and manner of installation.

(d) When utilities cross or otherwise occupy the right-of-way of a direct Federal or Federal-aid highway project on Federal lands, and when the right-of-way grant is for highway purposes only, the utility must also obtain and comply with the terms of a right-of-way or other occupancy permit for the Federal agency having jurisdiction over the underlying land.

[50 FR 20354, May 15, 1985, as amended at 53 FR 2833, Feb. 2, 1988]

Sec. 645.207 Definitions.

For the purpose of this regulation, the following definitions shall apply:

Aesthetic quality--those desirable characteristics in the appearance of the highway and its environment, such as harmony between or blending of natural and manufactured objects in the environment, continuity of visual form without distracting interruptions, and simplicity of designs which are desirably functional in shape but without clutter.

Border area--the area between the traveled way and the right-of-way line.

Clear roadside policy--that policy employed by a transportation department to provide a clear zone in order to increase safety, improve traffic operations, and enhance the aesthetic quality of highways by designing, constructing and maintaining highway roadsides as wide, flat, and rounded as practical and as free as practical from natural or manufactured hazards such as trees, drainage structures, nonyielding sign supports, highway lighting supports, and utility poles and other ground-mounted structures. The policy should address the removal of roadside obstacles which are likely to be associated with accident or injury to the highway user, or when such obstacles are essential, the policy should provide for appropriate countermeasures to reduce hazards. Countermeasures include placing utility facilities at locations which protect out-of-control vehicles, using breakaway features, using impact attenuation devices, or shielding. In all cases full consideration shall be given to sound engineering principles and economic factors.

Clear zone--the total roadside border area starting at the edge of the traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or the area at the toe of a non-recoverable slope available for safe use by an errant vehicle. The desired width is dependent upon the traffic volumes and speeds, and on the roadside geometry. The current edition of the AASHTO ``Roadside Design Guide'' should be used as a guide for establishing clear zones for various types of highways and operating conditions. This publication is available for inspection and copying from the FHWA Washington Headquarters and all FHWA Division Offices as prescribed in 49 CFR part 7. Copies of current AASHTO publications are available for purchase from the American Association of State Highway and Transportation Officials, Suite 225, 444 North Capitol Street, NW, Washington, D.C. 20001, or electronically at http://www.aashto.org.

Direct Federal highway projects--those active or completed highway projects such as projects under the Federal Lands Highways Program which are under the direct administration of the Federal Highway Administration (FHWA)

Federal-aid highway projects--those active or completed highway projects administered by or through a State transportation department which involve or have involved the use of Federal-aid highway funds for the development, acquisition of right-of-way, construction or improvement of the highway or related facilities, including highway beautification projects under 23 U.S.C. 319, Landscaping and Scenic Enhancement.

Freeway--a divided arterial highway with full control of access.

Highway--any public way for vehicular travel, including the entire area within the right-of-way and related facilities constructed or improved in whole or in part with Federal-aid or direct Federal highway funds.

Transportation department--that department, agency, commission, board, or official of any State or political subdivision thereof, charged by its law with the responsibility for highway administration.

Private lines--privately owned facilities which convey or transmit the commodities outlined in the definition of utility facility of this section, but devoted exclusively to private use.

Right-of-way--real property, or interests therein, acquired, dedicated or reserved for the construction, operation, and maintenance of a highway in which Federal-aid or direct Federal highway funds are or have been involved in any stage of development. Lands acquired under 23 U.S.C. 319 shall be considered to be highway right-of-way.

State transportation department--the transportation department of one of the 50 States, the District of Columbia, or Puerto Rico.

Use and occupancy agreement--the document (written agreement or permit) by which the transportation department approves the use and occupancy of highway right-of-way by utility facilities or private lines.

Utility facility--privately, publicly or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public. The term utility shall also mean the utility company inclusive of any substantially owned or controlled subsidiary. For the purposes of this part, the term includes those utility-type facilities which are owned or leased by a government agency for its own use, or otherwise dedicated solely to governmental use. The term utility includes those facilities used solely by the utility which are a part of its operating plant.

[50 FR 20345, May 15, 1985, as amended at 51 FR 16834, May 7, 1986; 53 FR 2833, Feb. 2, 1988; 55 FR 25828, June 25, 1990; 60 FR 34850, July 5, 1995; 61 FR 12022, Mar. 25, 1996; 65 FR 70311, Nov. 22, 2000]

Sec. 645.209 General requirements.

(a) Safety. Highway safety and traffic safety are of paramount, but not of sole, importance when accommodating utility facilities within highway right-of-way. Utilities provide an essential public service to the general public. Traditionally, as a matter of sound economic public policy and law, utilities have used public road right-of-way for transmitting and distributing their services. The lack of sufficient right-of-way width to accommodate utilities outside the desirable clear zone, in and of itself, is not a valid reason to preclude utilities from occupying the highway right-of-way. However, due to the nature and volume of highway traffic, the effect of such joint use on the traveling public must be carefully considered by transportation departments before approval of utility use of the right-of-way of Federal-aid or direct Federal highway projects is given. Adjustments in the operating characteristics of the utility or the highway or other special efforts may be necessary to increase the compatibility of utility-highway joint use. The possibility of this joint use should be a consideration in establishing right-of-way requirements for highway projects. In any event, the design, location, and manner in which utilities use and occupy the right-of-way of Federal-aid or direct Federal highway projects must conform to the clear roadside policies for the highway involved and otherwise provide for a safe traveling environment as required by 23 U.S.C. 109(l)(1).

(b) New above ground installations. On Federal-aid or direct Federal highway projects, new above ground utility installations, where permitted, shall be located as far from the traveled way as possible, preferably along the right-of-way line. No new above ground utility installations are to be allowed within the established clear zone of the highway unless a determination has been made by the transportation department that placement underground is not technically feasible or is unreasonably costly and there are no feasible alternate locations. In exceptional situations when it is essential to locate such above ground utility facilities within the established clear zone of the highway, appropriate countermeasures to reduce hazards shall be used. Countermeasures include placing utility facilities at locations which protect or minimize exposure to out-of-control vehicles, using breakaway features, using impact attenuation devices, using delineation, or shielding.

(c) Installations within freeways.

(1) Each State transportation department shall submit an accommodation plan in accordance with Secs. 645.211 and 645.215 which addresses how the State transportation department will consider applications for longitudinal utility installations within the access control lines of a freeway. This includes utility installations within interchange areas which must be constructed or serviced by direct access from the main lanes or ramps. If a State transportation department elects to permit such use, the plan must address how the State transportation department will oversee such use consistent with this subpart, Title 23 U.S.C., and the safe and efficient use of the highways.

(2) Any accommodation plan shall assure that installations satisfy the following criteria:

(i) The effects utility installations will have on highway and traffic safety will be ascertained, since in no case shall any use be permitted which would adversely affect safety.

(ii) The direct and indirect environmental and economic effects of any loss of productive agricultural land or any productivity of any agricultural land which would result from the disapproval of the use of such right-of-way for accommodation of such utility facility will be evaluated.

(iii) These environmental and economic effects together with any interference with or impairment of the use of the highway in such right-of-way which would result from the use of such right-of-way for the accommodation of such utility facility will be considered.

(iv) [Reserved]

(v) A utility strip will be established along the outer edge of the right-of-way by locating a utility access control line between the proposed utility installation and the through roadway and ramps. Existing fences should be retained and, except along sections of freeways having frontage roads, planned fences should be located at the freeway right-of-way line. The State or political subdivision is to retain control of the utility strip right-of-way including its use by utility facilities. Service connections to adjacent properties shall not be permitted from within the utility strip.

(3) Nothing in this part shall be construed as prohibiting a transportation department from adopting a more restrictive policy than that contained herein with regard to longitudinal utility installations along freeway right-of-way and access for constructing and/or for servicing such installations.

(d) Uniform policies and procedures. For a transportation department to fulfill its responsibilities to control utility use of Federal-aid highway right-of-way within the State and its political subdivisions, it must exercise or cause to be exercised, adequate regulation over such use and occupancy through the establishment and enforcement of reasonably uniform policies and procedures for utility accommodation.

(e) Private lines. Because there are circumstances when private lines may be allowed to cross or otherwise occupy the right-of-way of Federal-aid projects, transportation departments shall establish uniform policies for properly controlling such permitted use. When permitted, private

lines must conform to the provisions of this part and the provisions of 23 CFR 1.23(c) for longitudinal installations.

(f) Direct Federal highway projects. On direct Federal highway projects, the FHWA will apply, or cause to be applied, utility and private line accommodation policies similar to those required on Federal-aid highway projects. When appropriate, agreements will be entered into between the FHWA and the transportation department or other government agencies to ensure adequate control and regulation of use by utilities and private lines of the right-of-way on direct Federal highway projects.

(g) Projects where state lacks authority. On Federal-aid highway projects where the State transportation department does not have legal authority to regulate highway use by utilities and private lines, the State transportation department must enter into formal agreements with those local officials who have such authority. The agreements must provide for a degree of protection to the highway at least equal to the protection provided by the State transportation department's utility accommodation policy approved under the provisions of Sec. 645.215(b) of this part. The project agreement between the State transportation department and the FHWA on all such Federal-aid highway projects shall contain a special provision incorporating the formal agreements with the responsible local officials.

(h) Scenic areas. New utility installations, including those needed for highway purposes, such as for highway lighting or to serve a weigh station, rest area or recreation area, are not permitted on highway right-of-way or other lands which are acquired or improved with Federal-aid or direct Federal highway funds and are located within or adjacent to areas of scenic enhancement and natural beauty. Such areas include public park and recreational lands, wildlife and waterfowl refuges, historic sites as described in 23 U.S.C. 138, scenic strips, overlooks, rest areas and landscaped areas. The State transportation department may permit exceptions provided the following conditions are met:

(1) New underground or aerial installations may be permitted only when they do not require extensive removal or alteration of trees or terrain features visible to the highway user or impair the aesthetic quality of the lands being traversed.

(2) Aerial installations may be permitted only when:

(i) Other locations are not available or are unusually difficult and costly, or are less desirable from the standpoint of aesthetic quality,

(ii) Placement underground is not technically feasible or is unreasonably costly, and

(iii) The proposed installation will be made at a location, and will employ suitable designs and materials, which give the greatest weight to the aesthetic qualities of the area being traversed. Suitable designs include, but are not limited to, self-supporting armless, single-pole construction with vertical configuration of conductors and cable.

(3) For new utility installations within freeways, the provisions of paragraph (c) of this section must also be satisfied.

(i) Joint use agreements. When the utility has a compensable interest in the land occupied by its facilities and such land is to be jointly occupied and used for highway and utility purposes, the transportation department and utility shall agree in writing as to the obligations and responsibilities of each party. Such joint-use agreements shall incorporate the conditions of occupancy for each party, including the rights vested in the transportation department and the rights and privileges retained by the utility. In any event, the interest to be acquired by or vested in the transportation department in any portion of the right-of-way of a Federal-aid or direct Federal highway project to be vacated, used or occupied by utilities or private lines, shall be adequate for the construction, safe operation, and maintenance of the highway project.

(j) Traffic control plan. Whenever a utility installation, adjustment or maintenance activity will affect the movement of traffic or traffic safety, the utility shall implement a traffic control plan and utilize traffic control devices as necessary to ensure the safe and expeditious movement of traffic around the work site and the safety of the utility work force in accordance with procedures established by the transportation department. The traffic control plan and the application of traffic control devices shall conform to the standards set forth in the current edition of the ``Manual on Uniform Traffic Control Devices'' (MUTCD) and 23 CFR part 630, subpart J. This publication is available for inspection and copying from the FHWA Washington Headquarters and all FHWA Division Offices as prescribed in 49 CFR part 7.

(k) Corrective measures. When the transportation department determines that existing utility facilities are likely to be associated with injury or accident to the highway user, as indicated by accident history or safety studies, the transportation department shall initiate or cause to be initiated in consultation with the affected utilities, corrective measures to provide for a safer traffic environment. The corrective measures may include changes to utility or highway facilities and should be prioritized to maximum safety benefits in the most cost-effective manner. The scheduling of utility safety improvements should take into consideration planned utility replacement or upgrading schedules, accident potential, and the availability of resources. It is expected that the requirements of this paragraph will result in an orderly and positive process to address the identified utility hazard problems in a timely and reasonable manner with due regard to the effect of the corrective measures on both the utility consumer and the road user. The type of corrective measures is not prescribed. Any requests received involving Federal participation in the cost of adjusting or relocating utility facilities pursuant to this paragraph shall be subject to the provisions of 23 CFR part 645, subpart A, Utility Relocations, Adjustments and Reimbursement, and 23 CFR part 924, Highway Safety Improvement Program.

(l) Wetlands. The installation of privately owned lines or conduits on the right-of-way of Federal-aid or direct Federal highway projects for the purpose of draining adjacent wetlands onto the highway right-of-way is considered to be inconsistent with Executive Order 11990, Protection of Wetlands, dated May 24, 1977, and shall be prohibited.

(m) Utility determination. In determining whether a proposed installation is a utility or not, the most important consideration is how the STD views it under its own State laws and/or regulations.

[50 FR 20354, May 15, 1985, as amended at 53 FR 2833, Feb. 2, 1988; 60 FR 34851, July 5, 1995; 65 FR 70311, Nov. 22, 2000]

Sec. 645.211 State transportation department accommodation policies.

The FHWA should use the current editions of the AASHTO publications, ``A Guide for Accommodating Utilities Within Highway Right-of-Way'' and ``Roadside Design Guide'' to assist in the evaluation of adequacy of STD utility accommodation policies. These publications are available for inspection from the FHWA Washington Headquarters and all FHWA Division Offices as prescribed in 49 CFR part 7. Copies of current AASHTO publications are available for purchase from the American Association of State Highway and Transportation Officials, Suite 225, 444 North Capitol Street NW, Washington, DC 20001, or electronically at http://www.aashto.org. At a minimum, such policies shall make adequate provisions with respect to the following:

(a) Utilities must be accommodated and maintained in a manner which will not impair the highway or adversely affect highway or traffic safety. Uniform procedures controlling the manner, nature and extent of such utility use shall be established.

(b) Consideration shall be given to the effect of utility installations in regard to safety, aesthetic quality, and the costs or difficulty of highway and utility construction and maintenance.

(c) The State transportation department's standards for regulating the use and occupancy of highway right-of-way by utilities must include, but are not limited to, the following:

(1) The horizontal and vertical location requirements and clearances for the various types of utilities must be clearly stated. These must be adequate to ensure compliance with the clear roadside policies for the particular highway involved.

(2) The applicable provisions of government or industry codes required by law or regulation must be set forth or appropriately referenced, including highway design standards or other measures which the State transportation department deems necessary to provide adequate protection to the highway, its safe operation, aesthetic quality, and maintenance.

(3) Specifications for and methods of installation; requirements for preservation and restoration of highway facilities, appurtenances, and natural features and vegetation on the right-of-way; and limitations on the utility's activities within the right-of-way including installation within areas set forth by Sec. 645.209(h) of this part should be prescribed as necessary to protect highway interests.

(4) Measures necessary to protect traffic and its safe operation during and after installation of facilities, including control-of-access restrictions, provisions for rerouting or detouring traffic, traffic control measures to be employed, procedures for utility traffic control plans, limitations on vehicle parking and materials storage, protection of open excavations, and the like must be provided.

(5) A State transportation department may deny a utility's request to occupy highway right-of-way based on State law, regulation, or ordinances or the State transportation department's policy. However, in any case where the provisions of this part are to be cited as the basis for disapproving a utility's request to use and occupy highway right-of-way, measures must be provided to evaluate the direct and indirect environmental and economic effects of any loss of productive agricultural land or any impairment of the productivity of any agricultural land that would result from the disapproval. The

environmental and economic effects on productive agricultural land together with the possible interference with or impairment of the use of the highway and the effect on highway safety must be considered in the decision to disapprove any proposal by a utility to use such highway right-of-way.

(d) Compliance with applicable State laws and approved State transportation department utility accommodation policies must be assured. The responsible State transportation department's file must contain evidence of the written arrangements which set forth the terms under which utility facilities are to cross or otherwise occupy highway right-of-way. All utility installations made on highway right-of-way shall be subject to written approval by the State transportation department. However, such approval will not be required where so provided in the use and occupancy agreement for such matters as utility facility maintenance, installation of service connections on highways other than freeways, or emergency operations.

(e) The State transportation department shall set forth in its utility accommodation plan detailed procedures, criteria, and standards it will use to evaluate and approve individual applications of utilities on freeways under the provisions of Sec. 645.209(c) of this part. The State transportation department also may develop such procedures, criteria and standards by class of utility. In defining utility classes, consideration may be given to distinguishing utility services by type, nature or function and their potential impact on the highway and its user.

(f) The means and authority for enforcing the control of access restrictions applicable to utility use of controlled access highway facilities should be clearly set forth in the State transportation department plan.

(Information collection requirements in paragraphs (a), (b) and (c) were approved under control number 2125-0522, and paragraph (d) under control number 2125-0514)

[50 FR 20354, May 15, 1985, as amended at 53 FR 2834, Feb. 2, 1988; 55 FR 25828, June 25, 1990; 65 FR 70312, Nov. 22, 2000]

Sec. 645.213 Use and occupancy agreements (permits).

The written arrangements, generally in the form of use and occupancy agreements setting forth the terms under which the utility is to cross or otherwise occupy the highway right-of-way, must include or incorporate by reference:

(a) The transportation department standards for accommodating utilities. Since all of the standards will not be applicable to each individual utility installation, the use and occupancy agreement must, as a minimum, describe the requirements for location, construction, protection of traffic, maintenance, access restriction, and any special conditions applicable to each installation.

(b) A general description of the size, type, nature, and extent of the utility facilities being located within the highway right-of-way.

(c) Adequate drawings or sketches showing the existing and/or proposed location of the utility facilities within the highway right-of-way with respect to the existing and/or planned highway improvements, the traveled way, the right-of-way lines and, where applicable, the control of access lines and approved access points.

(d) The extent of liability and responsibilities associated with future adjustment of the utilities to accommodate highway improvements.

(e) The action to be taken in case of noncompliance with the transportation department's requirements.

(f) Other provisions as deemed necessary to comply with laws and regulations.

(Approved by the Office of Management and Budget under control number 2125-0522)

Sec. 645.215 Approvals.

(a) Each State transportation department shall submit a statement to the FHWA on the authority of utilities to use and occupy the right-of-way of State highways, the State transportation department's power to regulate such use, and the policies the State transportation department employs or proposes to employ for accommodating utilities within the right-of-way Federal-aid highways under its jurisdiction. Statements previously submitted and approved by the FHWA need not be resubmitted provided the statement adequately addresses the requirements of this part. When revisions are deemed necessary the changes to the previously approved statement may be submitted separately to the FHWA for approval. The State transportation department shall include similar information on the use and occupancy of such highways by private lines where permitted. The State shall identify those areas, if any, of Federal-aid highways within its borders where the State transportation department is without legal authority to regulate use by utilities. The statement shall address the nature of the formal agreements with local officials required by Sec. 645.209(g) of this part. It is expected that the statements required by this part or necessary revisions to previously submitted and approved statements will be submitted to FHWA within 1 year of the effective date of this regulation.

(b) Upon determination by the FHWA that a State transportation department's policies satisfy the provisions of 23 U.S.C. 109, 111, and 116, and 23 CFR 1.23 and 1.27, and meet the requirements of this regulation, the FHWA will approve their use on Federal-aid highway projects in that State

(c) Any changes, additions or deletions the State transportation department proposes to the approved policies are subject to FHWA approval.

(d) When a utility files a notice or makes an individual application or request to a STD to use or occupy the right-of-way of a Federal-aid highway project, the STD is not required to submit the matter to the FHWA for prior concurrence, except when the proposed installation is not in accordance with this regulation or with the STD's utility accommodation policy approved by the FHWA for use on Federal-aid highway projects.

(e) The State transportation department's practices under the policies or agreements approved under Sec. 645.215(b) of this part shall be periodically reviewed by the FHWA.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2125-0514)

[50 FR 20354, May 15, 1985, as amended at 53 FR 2834, Feb. 2, 1988; 60 FR 34851, July 5, 1995; 65 FR 70312, Nov. 22, 2000]

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Appendix No. 26
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LIST OF UTILITY COMPANIES HAVING SIGNED MASTER UTILITY AGREEMENT

UTILITY COMPANY	DATE OF AGREEMENT
1. A & N Electric Cooperative	8-2-84
2. Alpha Water Corporation	7-11-91
3. Amelia Telephone Corporation	11-21-86
4. American Electric Power	3-11-02
5. Appalachian Power Company	11-15-84
6. Arlington County Department of Public Works	6-19-87
7. AT & T Communications	3-25-85
8. Augusta County Service Authority	11-19-84
9. BARC Electric Cooperative	6-19-84
10. Bedford, City of	10-29-86
11. Blackstone, Town of	2-8-88
12. Bristol Virginia Utilities Board	12-26-84
13. Buchanan County Public Service Authority	2-12-84
14. Buggs Island Telephone Cooperative	1-22-87
15. Campbell County Utilities & Service Authority	5-25-84
16. Central Telephone Company of Virginia (Centel) (CenturyLink)	5-17-84
17. Central Virginia Electric Cooperative	8-10-84
18. CNG Transmission Corporation	11-07-95
19. Chesapeake & Potomac Telephone Co. of VA(Bell) (Verizon Virginia)	12-18-84
20. Citizens Telephone Cooperative	4-2-86
21. Clifton Forge Waynesboro Telephone Company (Lumos)	6-11-85
22. Colonial Pipeline Company	8-23-84
23. Columbia Gas of Virginia	1-8-85
24. Columbia Gas Transmission Corporation (Columbia Pipeline Group)	7-22-88
25. Commonwealth Gas Pipeline Corporation	10-19-84
26. Commonwealth Gas Services (Columbia)	10-8-86
27. Community Electric Cooperative	8-3-84
28. Continental Telephone Company of Virginia (CONTEL)(Verizon South)	11-19-84
29. Craig-Botetourt Electric Cooperative	10-9-85
30. Danville, City of	8-14-84
31. Delmarva Power & Light Company (A&N)	7-8-85
32. Dinwiddie County Water Authority	2-6-87
33. Dominion Virginia Power	5-8-2013
34. East Tennessee Natural Gas (Spectra)	8-12-96
35. Fairfax County Water Authority	4-10-85
36. Fairfax County (DPW)	1-16-87
37. Frederick County Sanitation Authority	2-27-89
38. General Telephone Company of the Southeast	12-14-84
39. Henry County Public Service Authority	5-22-87
40. Loudoun County Sanitation Authority	10-28-91
41. Madison Heights Sanitary District	4-16-85
42. Manassas, City of	6-9-95
43. McGaheysville Water Company	2-12-85

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44. MCI Telecommunications Corporation (Verizon Business)	4-25-89
45. Mecklenburg Electric Cooperative	5-16-84
46. Mountain Grove-Williamsville Telephone Company	6-26-89
47. New Castle Telephone Company	12-09-91
48. Newport News, City of	7-1-84
49. Northern Neck Electric Cooperative	8-9-84
50. Northern Virginia Electric Cooperative	2-28-85
51. Old Dominion Power Company	1-24-85
52. Peoples Mutual Telephone Company, Inc. (Fairfield)	5-3-84
53. Plantation Pipe Line Company	5-17-84
54. Potomac Edison Company, The	11-20-84
55. Potomac Electric Power Company	2-14-85
56. Powell Valley Electric Cooperative	5-8-84
57. Prince George Electric Cooperative	5-31-84
58. Prince William County Service Authority	12-06-91
59. Rappahannock Electric Cooperative	5-7-84
60. Roanoke & Botetourt Telephone Company (Lumos)	6-24-86
61. Roanoke Gas Company	5-2-88
62. Rockingham County	5-16-85
63. Scott County Telephone Company	4-27-84
64. Shenandoah Gas Company	4-30-84
65. Shenandoah Telephone Company	11-15-84
66. Shenandoah Valley Electric Cooperative	4-16-84
67. South Boston, City of	6-10-85
68. SouthernNet of Virginia	11-9-88
69. Southside Electric Cooperative	4-28-86
70. Southwestern Virginia Gas Company	7-12-91
71. Transcontinental Gas Pipe Line Corporation	9-4-87
72. U.S. Sprint Communications Company	10-19-88
73. United Cities Gas Company (Atmos)	7-9-97
74. United Inter-Mountain Telephone Company (CenturylyLink)	5-7-84
75. Virginia Natural Gas	6-3-87
76. Virginia American Water Company	1-20-87
77. Washington Gas Light Company	5-18-84
78. Washington County Service Authority	2-28-85
79. WilTel (Formerly Lightnet)	12-14-88

The Virginia Department of Transportation

Appendix No. 27
Sheet 1 of 3
Revised 3-30-16

AGREEMENT
among
(Name of Utility Owner)
and
(Name of Municipality)
and
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
for
RELOCATION AND ADJUSTMENT OF

(Type of Facilities)

THIS AGREEMENT, made and entered into as of the_____day of_____,.19 , by and among the (Name of Utility Owner) (hereinafter called (NAME) and the (Name of Municipality) (hereinafter called MUNICIPALITY) and the COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION (hereinafter called STATE).

WITNESSETH

WHEREAS, the MUNICIPALITY and STATE are participating in the construction or reconstruction of a section of highway designated as (Route No.) Project: (Project No.), which will necessitate changes in the (NAME)'S (Type of Facilities); and

WHEREAS, the (NAME), MUNICIPALITY and the STATE wish to agree upon the terms and conditions under which the (NAME) will make the changes in its (Type of Facilities) and the MUNICIPALITY and STATE will reimburse the (NAME) the applicable cost incurred by such changes as hereinafter set forth;

NOW THEREFORE, for and in consideration of the premises and of the mutual covenants herein contained, the parties hereto agree as follows:

SECTION I

The (NAME), after receiving authorization from the STATE, will with due diligence and dispatch relocate and adjust its (Type of Facilities) in accordance with the attached plans, said plans being identified as: (Description of Utility Plans) showing existing and proposed (Type of Facilities).

The Virginia Department of Transportation

SECTION II

(a) It has been determined that the Project is responsible for bearing the applicable cost of this adjustment as indicated on the attached plans. The estimated cost of this adjustment to be borne by the MUNICIPALITY and STATE is (Total Applicable Cost) as set forth in the attached estimate, said estimate being identified as (Description of Utility Estimate).

(b) The MUNICIPALITY is responsible for (Percentage) of the actual applicable cost of the adjustment and the STATE is responsible for (Percentage) of the actual applicable cost of the adjustment.

(c) The MUNICIPALITY shall permit the (NAME) to trim, cut and keep clear trees undergrowth and other obstructions under and adjacent to its facilities within the MUNICIPALITY'S right of way which may endanger or interfere with the efficient operations of the (Type of Facilities). The extent of and the techniques used in such trimming, cutting, and clearing shall be mutually agreed upon by authorized representatives of the MUNICIPALITY and the (NAME).

SECTION III

(a) In the event the MUNICIPALITY should request at any time hereafter that the facilities as adjusted onto street rights Of ways at project expense be again adjusted when they are located on street rights of way, the MUNICIPALITY will pay the (NAME) the applicable cost incurred by the (NAME) in connection with such alterations, rebuilding or relocation of its facilities.

(b) In the event the MUNICIPALITY should request at any time hereafter that the facilities which were not adjusted hereunder, but for which the (NAME)'S rights of way were encompassed, by the street rights of way be adjusted, the MUNICIPALITY will pay the (NAME) the applicable costs incurred by the (NAME) in connection with such alterations, rebuilding or relocation of its facilities

(c) In the event the MUNICIPALITY should request at any time hereafter that the facilities as adjusted onto street rights of way at (NAME)'s expense, be again adjusted when they are located on street rights of way, the (NAME) will alter, rebuild or relocate its facilities in accordance with the terms of the franchise agreement.

SECTION IV

(a) The work will be done and all records kept in accordance with Code of Federal Regulations Title 23, Chapter 1, Part 645, and any revisions or supplements thereto, in effect as of the date of this agreement. Actual and related indirect costs will be accumulated by the (NAME) and kept in accordance with a work order accounting procedure as prescribed or accepted by the (Name of Regulator).

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(b) All costs, records and accounts are subject to audit by authorized representatives of the MUNICIPALITY and STATE. During the progress of construction and for a period of three years from the date final payment has been received by the (NAME), the records pertaining to the adjustment and accounting therefore will be available for inspection by representatives of the MUNICIPALITY, STATE and Federal Highway Administration.

IN WITNESS WHEREOF, each party hereto has caused this Agreement to be executed in triplicate in its name and on its behalf by its duly authorized officer or agent as of the day and year first above written.

In the presence of:

_____
As to the (Name of Utility Owner)

(Name of Utility Owner)

By:_____
Title

In the presence of:

_____
As to the (Name of Municipality)

(Name of Municipality)
By:_____
Title

In the presence of:

_____
As to the Commonwealth

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

By:_____
State R/W & Utilities Director

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The Virginia Department of Transportation

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Sheet 1 of 3
3-30-16

AGREEMENT
between
(Name of Municipality)
and
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
FOR ADJUSTMENT OF
(Type of Facilities)

THIS AGREEMENT, made and entered into as of the_____day of_____, 19___, by and between the (Name of Municipality) (hereinafter called MUNICIPALITY) and the COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION, (herein after called STATE).

WITNESSETH

WHEREAS, the STATE and MUNICIPALITY are participating in the construction or reconstruction of a section of highway designated as (Route No.), Project: (Project No.) which will necessitate changes in the MUNICIPALITY'S (Type of Facilities); and,

WHEREAS, the STATE and the MUNICIPALITY wish to agree upon the terms and conditions under which the necessary changes will be made as hereinafter set forth;

NOW THEREFORE, for and in consideration of the premises and of the mutual covenants herein contained, the parties hereto agree as follows:

SECTION I

(a) It will be to the best interest of the STATE and the MUNICIPALITY to have these (Type of Facilities) included in the highway contract to be adjusted by the highway contractor.

(b) The STATE, through its highway contractor will relocate and adjust the MUNICIPALITY'S (Type of Facilities) in accordance with the attached plans and the STATE'S Road and bridge Specifications; said plans being identified as (Description of Utility Plans) of the STATE'S project construction plans for Project: (Project No.).

The Virginia Department of Transportation

SECTION II

(a) It has been determined that the project is responsible for bearing (Applicable Cost) of the (Type of Facilities) adjustments indicated in Section I (b).

(b) It has been determined that the MUNICIPALITY is responsible for bearing (Applicable Cost) of the (Type of Facilities) adjustments indicated in SECTION I(b), due to betterment and will reimburse the STATE for these items included in the highway contract. Reimbursement will be based on the unit prices in the highway contract, awarded by the STATE, plus the applicable construction engineering costs.

(c) The MUNICIPALITY is responsible for (Percentage) of the project cost of the adjustment and the STATE is responsible for (Percentage) of the project cost of the adjustment.

(d) In the event, at any time hereafter that the (Type of Facilities) indicated in SECTION I(b) be altered, rebuilt or relocated due to highway construction, the applicable cost incurred by the MUNICIPALITY in connection with such alteration, rebuilding or relocation of its facilities will be paid in accordance with the prevailing laws or rules and regulations in effect at the time the work is performed.

SECTION III

(a) The MUNICIPALITY will perform certain incidental work in conjunction with the utility work included in the highway contract such as (Type of Work) and will also inspect the utility relocation work with its own forces, reporting through the Highway Resident Engineer, and upon completion will certify to the STATE that the work included in the highway contract was performed in a satisfactory manner. The total estimated cost of this incidental work and inspection is (Cost) as outlined in the attached letter dated (Date) from ( ), and will be borne as indicated in SECTION II of this agreement. The MUNICIPALITY hereby agrees to submit bills for actual costs incurred and to keep accurate records in accordance with Code of Federal Regulations Title 23, Chapter 1, Part 645, and any revisions or supplements thereto, in effect as of the date of this agreement. All costs, records and accounts are subject to audit by authorized representatives of the STATE and/or Federal Highway Administration. During the progress of construction and for a period of three years from the date final payment has been received by the Municipality, the records pertaining to the adjustment and accounting therefor will be available for inspection by authorized representatives of the STATE and Federal Highway Administration.

The MUNICIPALITY agrees that the existing facilities which are to be abandoned will become the property of the STATE'S highway contractor. Any salvage value derived therefor will accrue to the STATE'S highway contractor.

The Virginia Department of Transportation

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IN WITNESS WHEREOF, each party has caused this agreement to be executed in duplicate in its name and on its behalf by its duly authorized officer as of the day and year first above written.

In the presence of:

_____
As to the (Name of Municipality)

(Name of Municipality)
By:_____
Title

In the presence of:

_____
As to the Commonwealth

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

By:_____
State R/W & Utilities & Director

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The Virginia Department of Transportation

Appendix No. 29
Sheet 1 of 2
3-30-16

AGREEMENT
between
_____
and
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
for
_____BRIDGE ATTACHMENT

THIS AGREEMENT, made and entered into as of the_____ day of_____, 19 _, by and between the (Name of Utility Owner) (hereinafter called UTILITY), and the COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION (hereinafter called the STATE).

WITNESSETH

WHEREAS, the STATE is proposing to construct a bridge structure designated as Project_____, B _____, and ;

WHEREAS, the UTILITY has requested the STATE to include a bridge attachment, in the construction of this structure; and

WHEREAS, the STATE and UTILITY wish to agree upon the terms and conditions under which the bridge attachment will be constructed as hereinafter set forth:

NOW THEREFORE, for and in consideration of the premises and of the mutual covenants herein contained, the parties hereto agree as follows:

SECTION I

(a) It will be to the best interest of the STATE and the UTILITY to have the bridge attachment included in the highway contract to be constructed by the highway contractor.

(b) The STATE, through its highway contractor, will construct the UTILITY'S bridge attachment which consists of_____in accordance with attached plans; said plans being identified as_____ half size plan sheets, numbered_____of the STATE'S Construction plans for Project_____.

SECTION II

(a) The STATE will upon application by the UTILITY, issue and continue in effect a permit to the UTILITY for the construction, maintenance and use of the bridge attachment indicated in SECTION I (b).

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(b) It has been determined that the UTILITY is responsible for bearing 100% of the cost of the bridge attachment indicated in SECTION I (b) and will reimburse the STATE for the cost of this bridge attachment included in the highway contract. Reimbursement will be based on the lump sum price in the highway contract, awarded by the STATE, plus the applicable construction engineering cost. Payment shall be due and payable in thirty (30) days from the date of the STATE'S billing.

SECTION III

(a) The bridge attachment of the UTILITY erected under such a permit shall be and remain the property of the UTILITY, no charge shall at any time be made for the use of the bridge structure occupied by the UTILITY'S bridge attachment, or for the privilege of constructing, maintaining, and using said bridge attachment. Any construction or maintenance operations to be performed by the UTILITY within the STATE right of way must have prior approval of the STATE. When emergency conditions require immediate maintenance operations by the UTILITY, such operations may be performed without advance notice to the STATE. The UTILITY will, to the best of its ability, perform all operations within the STATE right of way in a manner which will reduce to a minimum interference to the flow of traffic and disturbance of the roadways, which will provide a maximum of safety to traffic and to the UTILITY'S forces. Any liability incurred as a result of such performance shall be assumed by the UTILITY.

(b) In the event the STATE should request at any time hereafter that the bridge attachment be relocated, the UTILITY will remove and/or relocate the bridge attachment at no cost to the STATE.

SECTION IV

The UTILITY will also inspect the bridge attachment with its own forces, reporting through the Transportation Resident Engineer, and upon completion will certify to the STATE that the bridge attachment included in the highway contract was performed in a satisfactory manner. The UTILITY agrees to bear the cost of this inspection.

IN WITNESS WHEREOF, each party has caused this agreement to be executed in duplicate in its name and on its behalf by its duly authorized officer as of the day and year first above written.

In the presence of:

_____ _____

_____ By:_____
As to the (_____) Title

In the presence of: COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

_____ By:_____
As to the Commonwealth State R/W & Utilities & Director

The Virginia Department of Transportation

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AGREEMENT
among
_____
and
_____
and
COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION
for
RELOCATION AND ADJUSTMENT OF
_____

THIS AGREEMENT, made and entered into as of the_____day of_____, 20____, by and among the_____(hereinafter called UTILITY), and the _____ (hereinafter called MUNICIPALITY) and the COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION (hereinafter called STATE).

WITNESSETH

WHEREAS, the MUNICIPALITY and STATE are participating in the construction or reconstruction of a section of highway designated as_____Project: _____, which will necessitate changes in the UTILITY'S_____facilities; and

WHEREAS, the MUNICIPALITY has provided a resolution requesting that the existing overhead utilities be placed underground on this project in accordance with the STATE'S policy on placing utility facilities underground; and

WHEREAS, the UTILITY, the MUNICIPALITY and the STATE wish to agree upon the terms and conditions under which the UTILITY will make the necessary changes in its_____(type)_____ facilities and the MUNICIPALITY and STATE will reimburse the UTILITY the applicable cost incurred by such changes as hereinafter set forth.

NOW THEREFORE, for and in consideration of the premises and of the mutual covenants herein contained, the parties hereto agree as follows:

SECTION I

The UTILITY, after receiving authorization from the STATE, will with due diligence and dispatch relocate and adjust its _____ facilities in accordance with the attached plans, said plans being identified as: _____ facilities.showing existing and proposed

The Virginia Department of Transportation

SECTION II

In accordance with the STATE'S policy for placing utility facilities underground, it has been determined that the theoretical replacement facility cost is $_____.

(a) It has been determined that the Project is responsible for bearing % of the cost in connection with the utility adjustments indicated on the attached plans. The project cost is _____and is to be borne 2% by the MUNICIPALITY and 98% by the STATE.

(b) It has been determined that the UTILITY is responsible for bearing %. of the theoretical replacement facility cost in connection with the utility adjustments indicated on the attached plans and the cost is $_____.

SECTION III

In accordance with the STATE'S policy for placing utility facilities underground, it has been determined that the STATE and MUNICIPALITY is responsible for bearing the additional nonbetterment cost of the adjustments as indicated on the plans described in SECTION I hereof. The estimated additional nonbetterment cost of this adjustment to be borne by the MUNICIPALITY and the STATE is $_____as set forth in the attached estimate, said estimate being identified as_____.

(a) The STATE is responsible for bearing 50% of the actual applicable additional cost of the adjustment, except that in no case shall the STATE bear more than $5,000,000.00 of the additional cost to underground all types of overhead utility facilities on the above described project.

(b) The MUNICIPALITY is responsible for paying a minimum of 50% of the actual applicable additional cost of the adjustment. The MUNICIPALITY is responsible for paying 100% of that portion of any additional cost for placing utility facilities underground that exceed $10,000,000.00, should the total additional cost of all types of facilities exceed $10,000,000.00 on the above described project.

SECTION IV

The MUNICIPALITY shall permit the UTILITY to trim, cut and keep clear trees, undergrowth and other obstructions under and adjacent to its facilities within the MUNICIPALITY'S right of way which may endanger or interfere with the efficient operations of the _____ facilities. The extent of and the techniques used in such trimming, cutting, and clearing shall be mutually agreed upon by authorized representatives of the MUNICIPALITY and the UTILITY.

The Virginia Department of Transportation

SECTION V

(a) In the event the MUNICIPALITY should request at any time hereafter that the facilities as adjusted onto street rights of way at project expense be again adjusted when they are located on street rights of way, the MUNICIPALITY will pay the UTILITY the applicable cost incurred by the UTILITY in connection with such alterations, rebuilding or relocation of its facilities.

(b) In the event the MUNICIPALITY should request at any time hereafter that the facilities which were not adjusted hereunder, but for which the UTILITY'S rights of way were encompassed by the street rights of way, be adjusted, the MUNICIPALITY will pay the UTILITY the applicable costs incurred by the UTILITY in connection with such alterations, rebuilding or relocation of its facilities.

(c) In the event the MUNICIPALITY should request at any time hereafter that the facilities as adjusted onto street rights of ways at UTILITY'S expense, be again adjusted when they are located on street rights of way, the UTILITY will alter, rebuild or relocate its facilities in accordance with the terms of the franchise agreement.

SECTION VI

(a) The work will be done and all records kept in accordance with the Code of Federal Regulations Title 23, Chapter 1, Part 645 and any revisions or supplements thereto, in effect as of the date of this agreement. Actual and related indirect costs will be accumulated by the UTILITY and kept in accordance with a work order accounting procedure as prescribed or accepted by the_____.

(b) All costs, records and accounts are subject to audit by authorized representatives of the MUNICIPALITY and STATE. During the progress of construction and for a period of three years from the date final payment has been received by the UTILITY, the records pertaining to the adjustment and accounting therefor will be available for inspection by representatives of the MUNICIPALITY, STATE and Federal Highway Administration.

SECTION VII

The STATE shall reimburse the UTILITY for all applicable nonbetterment cost for the adjustment as indicated on the plans described in SECTION I hereof. The MUNICIPALITY shall reimburse the STATE for its share of the cost in accordance with the following plan:

(a) The MUNICIPALITY'S share of the adjustment indicated in SECTION II (a) hereof shall be billed and paid in accordance with the current procedures for project reimbursement by a municipality.

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(b) Within thirty days of the execution of this agreement or the authorization to proceed with the utility relocation work, whichever is the latest, the MUNICIPALITY shall pay the STATE the sum of $_____, to be applied to its share of the cost as outlined in SECTION III (b) hereof.

(c) On_____, (year), the MUNICIPALITY shall pay the STATE the sum of $_____ to be applied to its share of the cost as outlined in SECTION III (b) hereof.

(d) On_____, (year), the MUNICIPALITY shall pay the STATE the sum of $_____to be applied to its share of the cost as outlined in SECTION III (b) hereof.

[as many as needed]

(e) Within ninety days after receipt of the final billing from the UTILITY, the STATE shall provide a summary to the MUNICIPALITY, which shall reconcile the amount of the MUNICIPALITY'S share as outlined in SECTION III(B) hereof, with the amount paid as indicated above. The difference shall be paid by the MUNICIPALITY to the STATE or refunded to the MUNICIPALITY by the STATE, within thirty days of the date of the summary.

IN WITNESS WHEREOF, each party hereto has caused this Agreement to be executed in triplicate in its name and on its behalf by its duly authorized officer or agent as of the day and year first above written.

In the presence of:

_____
As to the (Name of Utility Owner)

(Name of Utility Owner)

By:_____
Title

In the presence of:

_____
As to the (Name of Municipality)

(Name of Municipality)
By:_____
Title

In the presence of:

_____
As to the Commonwealth

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

By:_____
State R/W & Utilities & Director

SECTION A-2-CLEAR ZONE GUIDELINES

INTRODUCTION

If practicable, a traversable recovery area for errant vehicles should be provided beyond the edge of the traveled way (edge of mainline pavement) in order to improve highway safety. Ideally this recovery area or "clear zone" should be free of obstacles such as unyielding sign and luminaire supports, non-traversable drainage structures, utility poles and steep slopes. It must be noted that clear zone roadside design involves a series of compromises between "absolute" safety and "engineering, environmental and economic constraints." The following clear zone guidelines were developed using the 1989 AASHTO Roadside Design Guide.

The recommended width of clear zone as discussed in the Roadside Design Guide is influenced by the traffic volume, speed, and embankment slope (see TABLE A-2-1). The Roadside Design Guide will be used as reference for determination of clear zones for Freeways; Rural and Urban Arterials (with shoulders); and Rural and Urban Collectors (with shoulders) with design speeds of 50 mph or greater and with design year ADT volumes greater than 2000. For Rural and Urban collectors with design speeds less than 50 mph and with a design year ADT less than 2000 and for Local Roads, no minimum required clear zone width will be specified; however, the designer should strive to provide as much clear zone as possible with a minimum ten foot width being desirable. Projects such as RRR, intersection improvements, etc., would not normally be provided with recoverable areas due to the intent of the project to provide minimal improvements and extend the service life of an existing highway for a fraction of the costs of reconstruction or to provide necessary interim improvements.

When adequate right of way is available, urban projects should be designed with shoulders in lieu of curbs (unless city ordinances require otherwise) and they should have clear zone widths consistent with their design speeds, traffic volumes, and embankment slopes as noted in TABLE A-2-1.

In urban and suburban areas where curb is utilized with a design speed of 45 mph or less, a 7.5 foot desirable and 6 foot minimum clear zone beyond the curb face is to be provided (see FIGURE A-2-1). It is policy to place utility poles or other fixed objects outside the clear zone (beyond the sidewalk space or behind the curb in the case of a raised median). However, in rare instances this may be impractical due to prevailing limitations or conditions (example - relocation of utility poles to another corridor may not be economically feasible). When this occurs, an absolute minimum clear zone of 1.5 feet beyond the face of curb is to be provided. The justification for not providing the 7.5 foot desirable or 6 foot minimum clear zone width beyond the curb face is to be documented in the project file (e.g. - F.I. Report, memorandum from Right of Way and Utilities Division, etc.).

When mountable curb is used in urban areas it is desirable to provide the same clear zone as would be provided for with a rural condition. However, if those values can not be obtained, the clear zone widths for 45 mph or less should be utilized.

TABLE A-2-1 Clear Zone Distances (In feet from edge of driving lane)

DESIGN SPEED	DESIGN ADT	6:1 OR FLATTER	5:1 TO 4:1	3:1
40 MPH	UNDER - 750	7 - 10	7 - 10	ΣΣ
OR	750 - 1500	10 - 12	12 - 14	ΣΣ
LESS	1500 - 6000	12 - 14	14 - 16	ΣΣ
	OVER 6000	14 - 16	16 - 18	ΣΣ
	UNDER 750	10 - 12	12 - 14	ΣΣ
45-50	750 - 1500	12 - 14	16 - 20	ΣΣ
MPH	1500 - 6000	16 - 18	20 - 26	ΣΣ
	OVER 6000	18 - 20	24 - 28	ΣΣ
	UNDER 750	12 - 14	14 - 18	ΣΣ
55	750 - 1500	16 - 18	20 - 24	ΣΣ
MPH	1500 - 6000	20 - 22	24 - 30	ΣΣ
	OVER 6000	22 - 24	26 - 32Σ	ΣΣ
	UNDER - 750	16 - 18	20 - 24	ΣΣ
60	750 - 1500	20 - 24	26 - 32Σ	ΣΣ
MPH	1500 - 6000	26 - 30	32 - 40Σ	ΣΣ
	OVER 6000	30 - 32Σ	36 - 44Σ	ΣΣ
	UNDER - 750	18 - 20	20 - 26	ΣΣ
65-70	750 - 1500	24 - 26	28 - 36Σ	ΣΣ
MPH	1500 - 6000	28 - 32Σ	24 - 42Σ	ΣΣ
	OVER 6000	30 - 34Σ	38 - 46Σ	ΣΣ

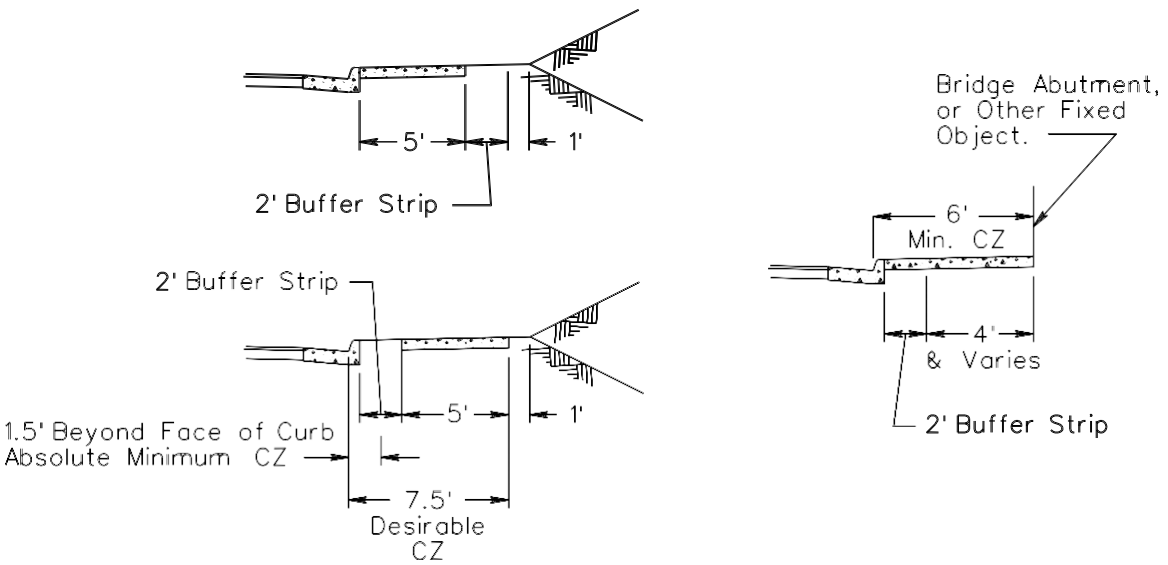
* Where a site specific investigation indicates a high probability of continuing accidents, or such occurrences are indicated by accident history, the designer may provide clear zone distances greater than 30 feet as indicated. Clear zones may be limited to 30 feet for practicality and to provide a consistent roadway template if previous experience with similar projects or designs indicates satisfactory performance.

** Since recovery is less likely on the unshielded, traversable 3:1 slopes, fixed objects should not be present in the vicinity of the toe of these slopes. Recovery of high speed vehicles that encroach beyond the edge of shoulder may be expected to occur beyond the toe of slope. Determination of the width of the recovery area at the toe of slope should take into consideration right of way availability, environmental concerns, economic factors, safety needs, and accident histories. Also, the distance between the edge of the travel lane and the beginning of the 3:1 slope should influence the recovery area provided at the toe

of slope. While the application may be limited by several factors, the fill slope parameters which may enter into determining a maximum desirable recovery area are illustrated in FIGURE A-2-4 on page A-40.

Source: The 1989 AASHTO Roadside Design Guide.

FIGURE A-2-1
URBAN CLEAR ZONE WIDTH GUIDELINES



CLEAR ZONE COST-EFFECTIVENESS ANALYSIS

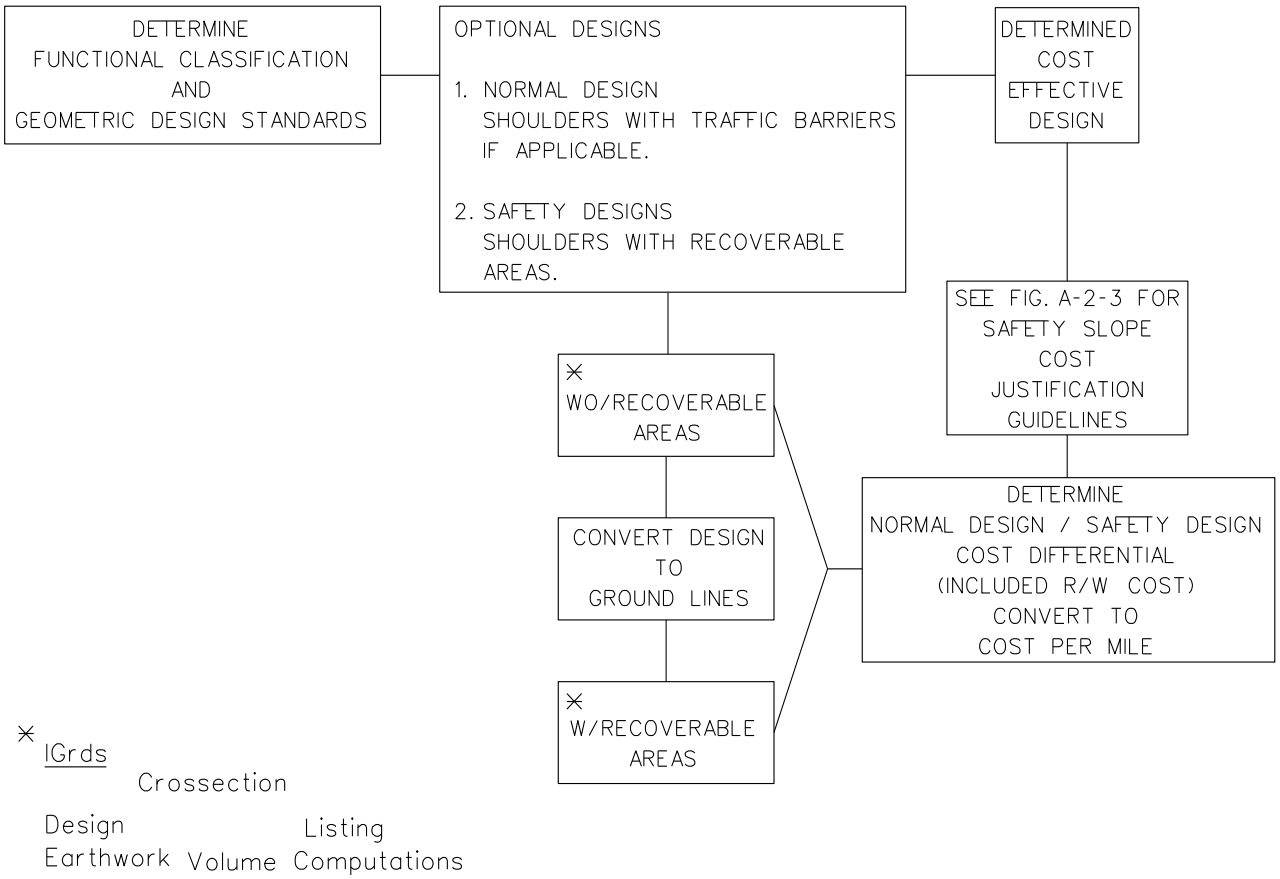
For projects where the clear zone widths from the AASHTO Roadside Design Guide are under consideration, Freeways; Rural and Urban Arterials (with shoulders); and Rural and Urban Collectors (with shoulders) with design speeds of 50 mph or greater and with a design year ADT greater than 2000, an early cost-effectiveness analysis is required to determine the feasibility of providing the recoverable areas to meet the clear zone requirements shown in TABLE A-2-1. This analysis should be done during the preliminary plan development process and should involve determining the additional construction and R/W costs to provide the desired clear zone.

Prior to establishing the additional construction and R/W cost estimate, the developed areas that would involve heavy R/W damages and/or relocations or environmental restrictions such as park properties, historic areas or wetlands should be noted and where practicable horizontal and vertical alignment adjustments are to be made to provide the desired recoverable areas and clear zones. In these situations alternate designs may include elimination of ditches and/or median width reductions with possible incorporation of raised medians or median barrier to reduce required R/W.

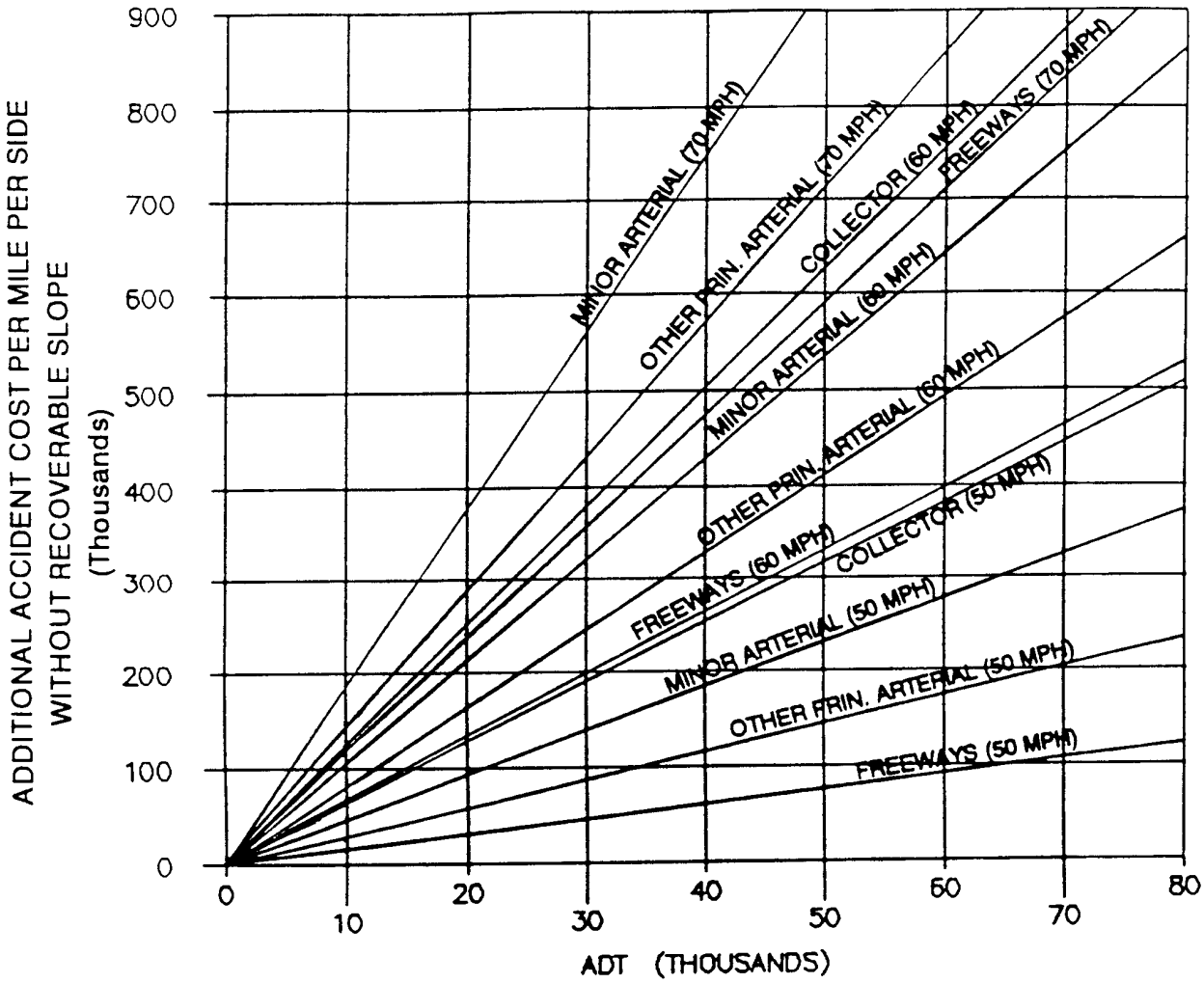
6/00

A suggested procedure is shown in FIGURE A-2-2 to develop the difference in cost between the typical section based on the project's functional classification and proper Geometric Design Standards and the typical section with the desired recoverable areas. Any other procedure which will provide this cost is acceptable as long as it is documented in the project files. After the additional cost to provide the recoverable area is determined, it should be compared to the estimated accident cost without the recoverable area as determined from FIGURE A-2-3. This cost comparison along with good engineering judgment should be used to determine the feasibility of providing the recoverable areas through the project and should be documented on the Project Scoping Form LD-403 or SR-1 as applicable.

FIGURE A-2-2M
COST EFFECTIVE SELECTION PROCEDURE



Note: Upon receipt of Normal Design and Safety Design earthwork quantities, a cursory review may indicate that the cost per mile per side for the earthwork alone far exceeds the Guideline for Maximum Cost per Mile Expenditure for Safety Slopes in Figure A-2-3, thereby eliminating the need to determine the other additional cost such as drainage extensions, right of way, etc.


ADDITIONAL ACCIDENT COST PER MILE PER SIDE
WITHOUT RECOVERABLE SLOPE
(Thousands)
900
800
700
600
500
400
300
200
100
0
0
10
20
30
40
50
60
70
80
ADT (THOUSANDS)
MINOR ARTERIAL (70 MPH)
OTHER PRIN. ARTERIAL (70 MPH)
COLLECTOR (60 MPH)
FREEWAYS (70 MPH)
MINOR ARTERIAL (60 MPH)
OTHER PRIN. ARTERIAL (60 MPH)
COLLECTOR (50 MPH)
FREEWAYS (60 MPH)
MINOR ARTERIAL (50 MPH)
OTHER PRIN. ARTERIAL (50 MPH)
FREEWAYS (50 MPH)

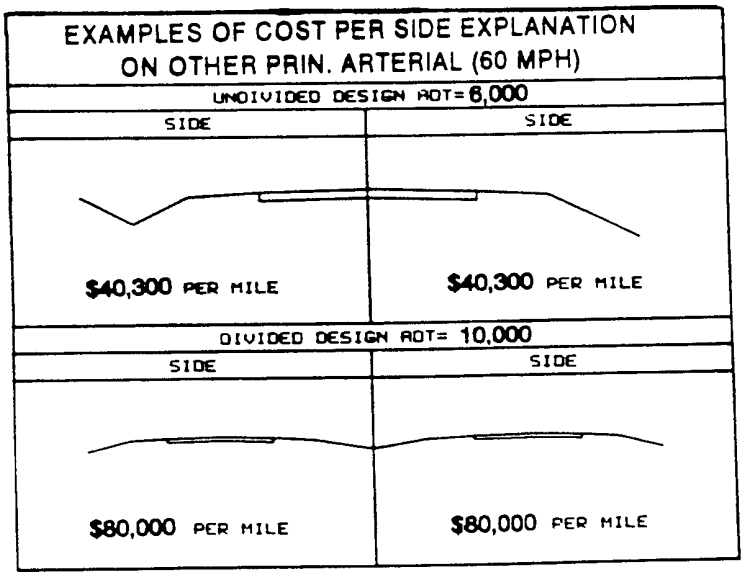
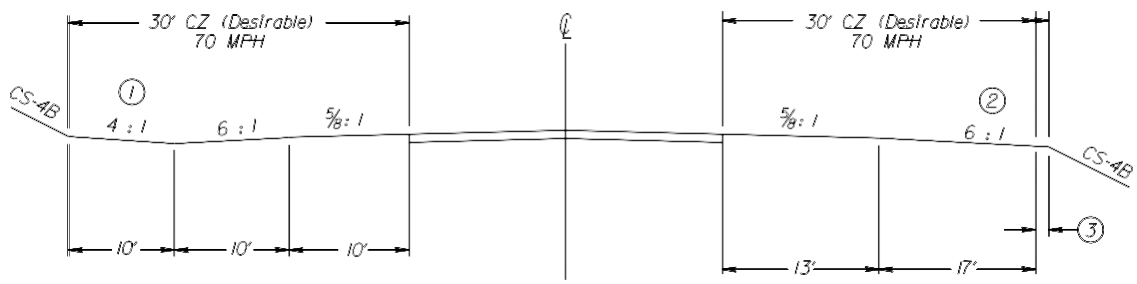

EXAMPLES OF COST PER SIDE EXPLANATION
ON OTHER PRIN. ARTERIAL (60 MPH)
UNDIVIDED DESIGN ADT=6,000
SIDE
SIDE
$40,300 PER MILE
$40,300 PER MILE
DIVIDED DESIGN ADT= 10,000
SIDE
SIDE
$80,000 PER MILE
$80,000 PER MILE

FIGURE NO. A-2-3
SAFETY SLOPE COST JUSTIFICATION GUIDELINES

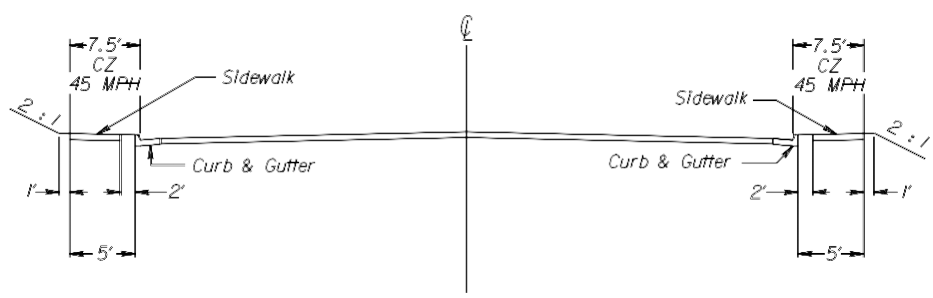
SHOWING CLEAR ZONES ON TYPICAL SECTIONS

The clear zone width(s) is to be clearly shown on the project typical sections if traversable slopes are being provided so that other divisions will be aware of the desirable clear zones for a project. When varying clear zone widths occur, furnish station to station breakdown. Following are typical methods of showing clear zone data on typical sections.



TYPICAL RURAL SECTION

(Other Principal Arterial - St'd. CS-4B used for example)
Design ADT > 6000



TYPICAL URBAN SECTION

(Minor Arterial Street used for example)

TYPICAL METHOD
OF SHOWING CLEAR ZONE DATA
ON TYPICAL SECTIONS

NOTES:

1. If the front slope of ditch is 6:1, the back slope should be 4:1, and if the front slope is 3:1, the back slope should be flat.

2. The preferred slope for recoverable areas with fills is 6:1 or flatter.

3. Recoverable area width to be increased 3' if GR-3 or 8 guardrail is required.

DETERMINING CLEAR ZONE WIDTH

The following is a guide and should be supplemented with sound engineering judgment:

Clear zone (CZ) is defined as the roadside border area, starting at the edge of the traveled way (edge of mainline pavement), available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope 4:1 or flatter, a non-recoverable slope between 4:1 and 3:1, and/or a clear run-out area. Previously, 30 ft. was considered to be the standard clear zone, but current guidelines, as shown in TABLE A-2-1, give values greater or less than 30 feet, depending on the roadside slopes, design speeds, and traffic volumes. These values should suggest only the approximate center of a range to be considered and not a precise distance to be held as absolute.

TABLE A-2-1 is to be used by the designer and may be modified by the values shown in TABLE A-2-2. See the 1989 AASHTO Roadside Design Guide for further details.

Embankment slopes must have a relatively smooth and firm surface to be truly recoverable or traversable.

Fill slopes between 3:1 and 4:1 are non-recoverable slopes, defined as one which is traversable, but from which most motorists will be unable to stop or to return to the roadway easily. Vehicles on such slopes typically can be expected to reach the bottom. Since a high percentage of encroaching vehicles will reach the toe of these slopes, the recovery area cannot logically end on the slope. Fixed obstacles should not be constructed along such slopes and a clear runout area (10' min.) at the base is desirable. FIGURE A-2-4 on page A-40 provides an example of a clear zone computation for non-recoverable slopes.

Any non-traversable hazards or fixed objects, including but not limited to those listed in TABLE A-3-1, page A-44 which are located within the clear zone as determined from TABLE A-2-1, should preferably be removed, relocated, made yielding, or as a last resort, shielded with a barrier.

HORIZONTAL CURVE ADJUSTMENTS

These modifications are normally only considered where accident histories indicate a need, or a specific site investigation shows a definitive accident potential which could be significantly lessened by increasing the clear zone width and such increases are cost effective.

TABLE A-2-2

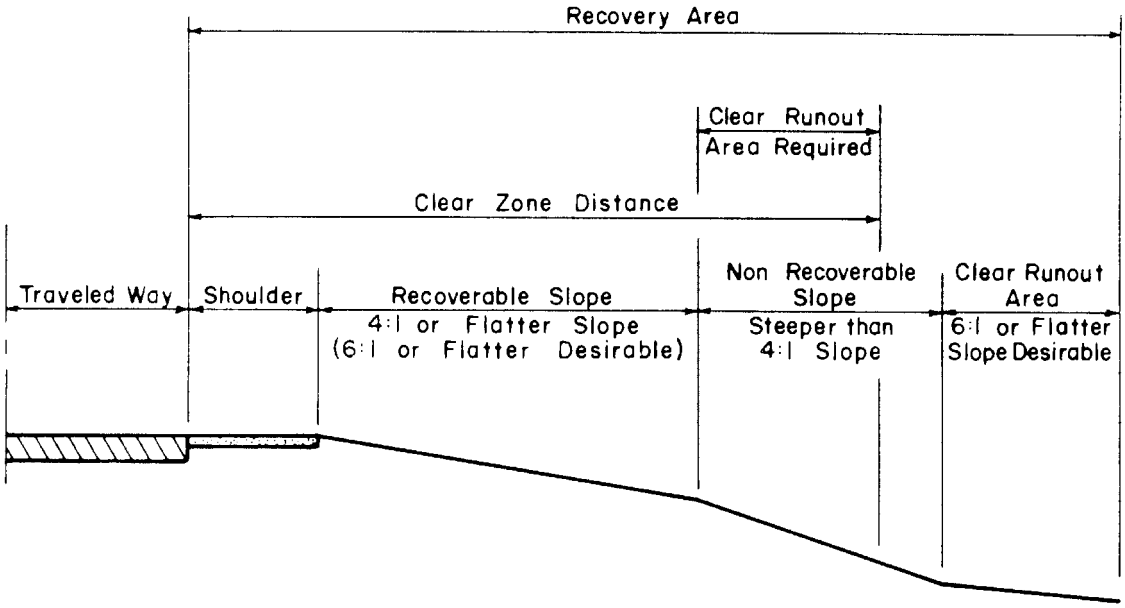
DEGREE OF CURVE	DESIGN SPEED						
	40	45	50	55	60	65	70
2.0	1.08	1.10	1.12	1.15	1.19	1.22	1.27
2.5	1.10	1.12	1.15	1.19	1.23	1.28	1.33
3.0	1.11	1.15	1.18	1.23	1.28	1.33	1.40
3.5	1.13	1.17	1.22	1.26	1.32	1.39	1.46
4.0	1.15	1.19	1.25	1.30	1.37	1.44	
4.5	1.17	1.22	1.28	1.34	1.41	1.49	
5.0	1.19	1.24	1.31	1.37	1.46		
6.0	1.23	1.29	1.36	1.45	1.54		
7.0	1.26	1.34	1.42	1.57			
8.0	1.30	1.38	1.48				
9.0	1.34	1.43	1.53				
10.0	1.37	1.47					
15.0	1.54						

$CZ_c = (L_c)\ (K_{cz})$ K_{cz} = curve correction factor

Where CZ_c = clear zone on outside of curvature, ft.
L_c = clear zone distance ft., Table A-2-1

Note: Clear zone correction factor is applied to outside of curves only. Curves flatter than 2.0^o don't require an adjusted clear zone.

FIGURE A-2-4 Example of a Parallel Embankment Slope Design



Source: The 1989 AASHTO Roadside Design Guide.

This figure illustrates a recoverable slope followed by a non-recoverable slope. Since the clear zone distance extends onto a non-recoverable slope, the portion of the clear zone distance on such a slope may be provided beyond the non-recoverable slope if practical. This clear runout area would then be included in the total recovery area. The clear runout area may be reduced in width based on existing conditions or site investigations. Such a variable slope typical section is often used as a compromise between roadside safety and economics. By providing a relatively flat recovery area immediately adjacent to the roadway, most errant motorists can recover before reaching the steeper slope beyond. The slope break may be liberally rounded so an encroaching vehicle does not become airborne. It is suggested that the steeper slope be made as smooth as practical and rounded at the bottom.

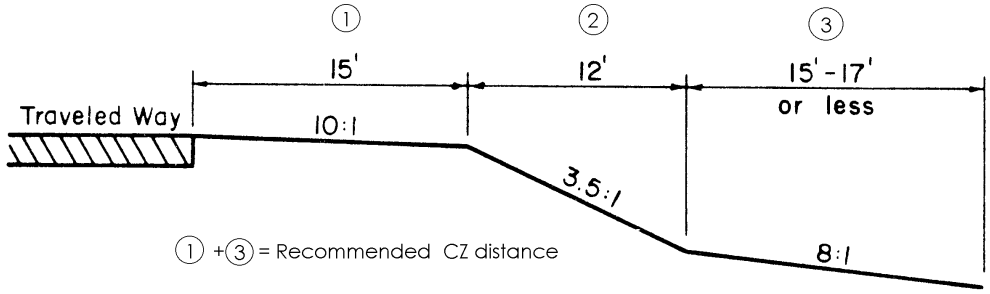
NON-RECOVERABLE PARALLEL SLOPES

Embankment slopes from 3:1 up to 4:1 are considered traversable if they are smooth and free of fixed object hazards. However, since many vehicles on slopes this steep will continue on to the bottom, a clear run-out area beyond the toe of the slope is desirable. The extent of this recovery area could be determined by first finding the available distance between the edge of the traveled way and the breakpoint of the recoverable slope to the non-recoverable slope. This distance is then subtracted from the total recommended clear zone distance based on the slope that is beyond the toe of the non-recoverable slope.

The result is the desirable clear run-out area. The following example illustrates this procedure:

EXAMPLE

Design ADT: 7000
Design Speed: 60 mph
Recommended clear zone distance for the 8:1 slope: 30-32 feet (from TABLE A-2-1)
Recovery distance before breakpoint of slope: 15 feet
Clear runout area at toe of slope: 30-32 feet minus 15 feet or 15-17 feet



(For Example of Alternate Design to reduce CZ requirement, see below)

Discussion: Using the steepest recoverable slope before or after the non-recoverable slope, a recovery distance is selected from Table A-2-1. In this example, the 8:1 slope beyond the base of the fill dictates a 30-32 foot recovery area. Since 15 feet are available at the top, an additional 15-17 feet could be provided at the bottom. All slope breaks may be rounded and no fixed objects would normally be built within the upper or lower portions of the clear zone or on the intervening slope.

The designer may find it safe and practical to provide less than the entire 15-17 feet at the toe of the slope. A smaller recovery area could be applicable based on the rounded slope breaks, the flatter slope at the top, or past accident histories. A specific site investigation may be appropriate in determining an appropriate recovery area at the toe of the slope.

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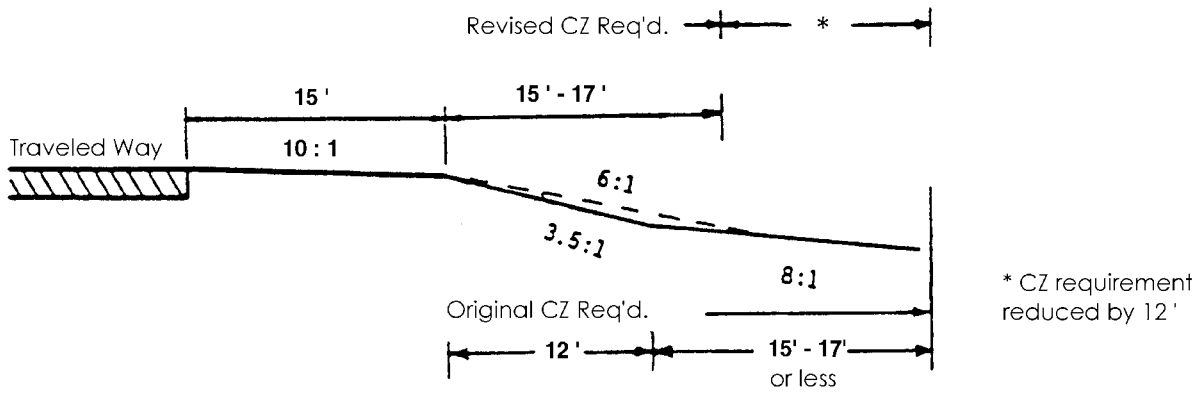
Example of Alternate Design (incorporating minor slope adjustment) to reduce total clearance requirement.



When traffic barriers must be provided because hazardous conditions can not be eliminated, see Section A-3-Barrier Installation Criteria.

Appendix 32
3-30-16

§ 56-468.1. Public Rights-of-Way Use Fee.

A. As used in this article:

"Access lines" are defined to include residence and business telephone lines and other switched common lines connecting the customer premises to the end office switch. Access lines do not include local, state, and federal government lines; access lines used to provide service to users as part of the Virginia Universal Service Plan; interstate and intrastate dedicated WATS lines; special access lines; off-premises extensions; official lines used by providers of telecommunications service for administrative, testing, intercept, and verification purposes; and commercial mobile radio service lines.

"Certificated provider of telecommunications service" means a public service corporation or locality holding a certificate issued by the State Corporation Commission to provide local exchange or interexchange telephone service.

"Locality" has the same meaning as contained in § 15.2-102.

"New installation of telecommunications facilities" or "new installation" includes the construction of new pole lines and new conduit systems, and the burying of new cables in existing public rights-of-way. New installation does not include adding new cables to existing pole lines and conduit systems.

"Public highway" means, for purposes of computing the Public Rights-of-Way Use Fee, the centerline mileage of highways and streets which are part of the State Highway System as defined in § 33.2-100, the secondary system of highways as defined in §§ 33.2-100 and 33.2-324, the highways of those cities and certain towns defined in § 33.2-319 and the highways and streets maintained and operated by counties which have withdrawn or elect to withdraw from the secondary system of state highways under the provisions of § 11 of Chapter 415 of the Acts of Assembly of 1932 and which have not elected to return.

B. Notwithstanding any other provisions of law, there is hereby established a Public Rights-of-Way Use Fee to replace any and all fees of general application (except for zoning, subdivision, site plan and comprehensive plan fees of general application) otherwise chargeable to a certificated provider of telecommunications service by the Commonwealth Transportation Board or a locality in connection with a permit for such occupation and use granted in accordance with § 56-458 or § 56-462. Cities and towns whose public streets and roads are not maintained by the Virginia Department of Transportation, and any county that has withdrawn or elects to withdraw from the secondary system of state highways under the provisions of § 11 of Chapter 415 of the Acts of Assembly of 1932, may impose the Public Rights-of-Way Use Fee only by local ordinance. Localities, their authorities or commissions, and the Commonwealth Transportation Board may allow certificated providers of telecommunications services to use their electric poles or electric conduits in exchange for payment of a fee.

C. The amount of the Public Rights-of-Way Use Fee shall be calculated annually by the Department of Transportation (VDOT), based on the calculations described in subsection D of this section. In no year shall the amount of the fee be less than fifty cents per access line per month.

D. The annual rate of the Public Rights-of-Way Use Fee shall be calculated by multiplying the number of public highway miles in the Commonwealth by a highway mileage rate (as defined in subsection E of this section), and by adding the number of feet of new installations in the Commonwealth (multiplied by one dollar per foot), and dividing this sum by the total number of access lines in the Commonwealth. The monthly rate shall be this annual rate divided by twelve.

E. The annual multiplier per mile is $250 from July 1, 1998, through June 30, 1999; $300 per mile for the year July 1, 1999, through June 30, 2000; $350 per mile for the year July 1, 2000, through June 30, 2001; and $425 per mile beginning July 1, 2001 and thereafter.

F. The data used for the calculation in subsection D shall be based on the following information and schedule: (i) all certificated providers of telecommunications services shall remit to VDOT by December 1 of each year data indicating the number of feet of new installations made during the one-year period ending September 30 of that year, which shall be auditable by affected localities, and the number of access lines as of September 30 of that year, which shall be auditable by affected localities; and (ii) the public highway mileage from the most recently published VDOT report. By the following January 15, VDOT shall calculate the Public Rights-of-Way Use Fee to be used in the fiscal year beginning the next ensuing July 1 and report it to all affected localities and certificated providers of local exchange telephone services.

G. A certificated provider of local exchange telephone service shall collect the Public Rights-of-Way Use Fee on a per access line basis by adding the fee to each ultimate end user's monthly bill for local exchange telephone service. The Public Rights-of-Way Use Fee shall, when billed, be stated as a distinct item separate and apart from the monthly charge for local exchange telephone service. Until the ultimate end user pays the Public Rights-of-Way Use Fee to the local exchange service provider, the Public Rights-of-Way Use Fee shall constitute a debt of the consumer to the locality or VDOT. If any ultimate end user refuses to pay the Public Rights-of-Way Use Fee, the local exchange service provider shall notify the locality or VDOT, as appropriate. After the consumer pays the Public Rights-of-Way Use Fee to the local exchange service provider, such fee collected shall be deemed to be held in trust by the local exchange service provider until remitted to the locality or VDOT.

H. Within two months after the end of each calendar quarter, each certificated provider of local exchange telephone service shall remit the amount of Public Rights-of-Way Use Fees it has billed to ultimate end users during such preceding quarter, as follows:

1. The certificated provider of local exchange telephone service shall remit directly to the applicable locality all Public Rights-of-Way Use Fees billed in (i) cities, (ii) towns whose public streets and roads are not maintained by VDOT, and (iii) any county that has withdrawn or elects to withdraw from the secondary system of state highways under the provisions of § 11 of Chapter 415 of the Acts of Assembly of 1932 and that has elected not to return, provided, however, that such counties shall use a minimum of ten percent of the Public Rights-of-Way Use Fees they receive for transportation construction or maintenance purposes. Any city currently subject to § 15.2-3530 shall use a minimum of ninety percent of the Public Rights-of-Way Use Fees it receives for transportation construction or maintenance purposes.

2. The Public Rights-of-Way Use Fees billed in all other counties shall be remitted by each certificated provider of local exchange telephone service to VDOT. VDOT shall allocate the total amount received from certificated providers to the construction improvement program of the secondary system of state highways. Within such allocation to the secondary system, VDOT shall apportion the amounts so received among the several counties, other than those described in clause (iii) of subdivision 1, on the basis of population, with each county being credited a share of the total equal to the proportion that its population bears to the total population of all such counties. For purposes of this section the term "population" shall mean either population according to the latest United States census or the latest population estimate of the Weldon Cooper Center for Public Service of the University of Virginia, whichever is more recent. Such allocation and apportionment of Public Rights-of-Way Use Fees shall be in addition to, and not in lieu of, any other allocation of funds to such secondary system and apportionment to counties thereof provided by law.

I. Any locality with a franchise agreement, ordinance implementing a franchise agreement or other form of consent allowing the use of the public rights-of-way, existing prior to July 1, 1998, or any city or town with an ordinance or code section imposing a franchise fee or charge in effect as of February 1, 1997, may elect to continue enforcing such existing franchise, ordinance or code section or other form of consent in lieu of receiving the Public Rights-of-Way Use Fee; provided, however, that such city or town does not (i) discriminate among telecommunications service providers and (ii) adopt any additional rights-of-way management practices that do not comply with §§ 56-458 C and 56-462 C. The Public Rights-of-Way Use Fee shall not be imposed in any such locality.

Any locality electing to adopt the Public Rights-of-Way Use Fee by ordinance shall notify all affected certificated providers of local exchange telephone service no later than March 15 preceding the fiscal year. Such notice shall be in writing and sent by certified mail from such locality to the registered agent of the affected certificated provider of local exchange telephone service. For localities adopting the Public Rights-of-Way Use Fee by ordinance in 1998, collection of the fee shall begin on the first day of the month occurring ninety days after receipt of notice as required by this subsection.

(1998, cc. 742, 758; 2002, cc. 479, 489.)

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Appendix 33
3-30-16

§ 56-468.2. Reimbursement for relocation costs.

A. After July 1, 1998, certificated providers of telecommunications services shall receive reimbursement for eligible relocation costs incurred at the direction of a locality that imposes by ordinance the Public Rights-of-Way Use Fee or the Department of Transportation for new installations as defined in § 56-468.1 in any public rights-of-way in accordance with §§ 56-458 and 56-462 on the basis of age and according to the following schedule. Such reimbursement shall be received from either (i) the locality that granted the permit or franchise to use such right-of-way or (ii) the Commonwealth Transportation Board if the road or street is in the State Highway System or the secondary system of state highways:

1. For the first three years after the completion of the installation, the certificated provider of telecommunications service shall be reimbursed 100 percent of the eligible cost for the relocation of facilities installed in the public rights-of-way.

2. For the fourth through sixth year after the completion of the installation, the certificated provider of telecommunications service shall be reimbursed 50 percent of the eligible cost for the relocation of facilities installed in the public rights-of-way.

3. Beginning in the seventh year, the certificated provider of telecommunications service shall be responsible for the cost of relocating facilities installed in the public rights-of-way.

Such reimbursement shall be received from either (i) the locality that granted the permit or franchise to use such right-of-way or (ii) the Commonwealth Transportation Board if the road or street is in the State Highway System or the secondary system of state highways.

B. The amount of relocation reimbursement in any fiscal year to be reimbursed under this section shall not exceed the amount of Public Rights-of-Way Use Fees received by that locality either directly or through its secondary road fund apportionment in the preceding fiscal year. For facilities relocated in 1998 and 1999 at the direction of the locality or the Commonwealth Transportation Board, this limit on relocation reimbursement shall be the estimated annualized fees to be collected in that locality in 1998 for 1998 relocations and in 1999 for 1999 relocations. If the relocation reimbursement limit will be exhausted on a relocation project where two or more certificated providers of telecommunications service are eligible for relocation reimbursement, then the moneys available under the cap shall be shared by those eligible providers by prorating the reimbursement based on the reimbursement to which each provider would be entitled absent the limit.

(1998, cc. 742, 758.)

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Appendix 34
3-30-16

§ 56-458. Right to erect lines parallel to railroads; occupation of roads, streets, etc.; location of same.

A. Every telegraph company and every telephone company incorporated by this or any other state, or by the United States, may construct, maintain and operate its line along and parallel to any of the railroads of the Commonwealth, and shall have authority to occupy and use the public parks, roads, works, turnpikes, streets, avenues and alleys in any of the counties, with the consent of the board of supervisors or other governing authority thereof, or in any incorporated city or town, with the consent of the council thereof, and the waterways within this Commonwealth, for the erection of poles and wires, or cables, or the laying of underground conduits, portions of which they may lease, rent, or hire to other like companies; provided, however, that if the road or street be in the State Highway System or the secondary system of state highways, the consent of the board of supervisors or other governing authority of any county shall not be necessary, but a permit for such occupation and use shall first be obtained from the Commonwealth Transportation Board.

B. No locality or the Commonwealth Transportation Board shall impose any fees on a certificated provider of telecommunications service for the use of public rights-of-way except in the manner prescribed in § 56-468.1; provided, however, the provisions of § 56-468.1 shall not apply to providers of commercial mobile radio services.

C. No locality or the Commonwealth Transportation Board shall impose on certificated providers of telecommunications service, whether by franchise, ordinance or other means, any restrictions or requirements concerning the use of the public rights-of-way (including but not limited to the permitting process; notice, time and location of excavations and repair work; enforcement of the statewide building code; and inspections), which are (i) unfair or unreasonable or (ii) any greater than those imposed on the following users of the public rights-of-way: all providers of telecommunications services and nonpublic providers of cable television, electric, natural gas, water and sanitary sewer services. For purposes of this subsection, "restrictions or requirements concerning the use of the public rights-of-way" shall not include any existing franchise fee or the Public Rights-of-Way Use Fee.

D. Notwithstanding any other provision of law, any permit or other permission required by a locality pursuant to a franchise, ordinance, or other permission to use the public rights-of-way or by the Commonwealth Transportation Board of a certificated provider of telecommunications services to use the public rights-of-way shall be granted or denied within forty-five days from submission and, if denied, accompanied by a written explanation of the reasons the permit was denied and the actions required to cure the denial.

E. No locality receiving directly or indirectly a Public Rights-of-Way Use Fee or the Commonwealth Transportation Board shall require a certificated provider of telecommunications services to provide in-kind services or physical assets as a condition of consent to use public rights-of-way or easements, or in lieu of the Public Rights-of-Way Use Fee. This shall not limit the ability of localities, their authorities or commissions which provide utility services, or the Commonwealth Transportation Board to enter into voluntary pole attachment, conduit occupancy or conduit construction agreements with certificated providers of telecommunications service. Any locality, other than a city or town electing to continue to enforce an existing franchise, ordinance or other form of consent under subsection I of § 56-468.1, or the Commonwealth Transportation Board may continue to use pole attachments and conduits utilized as of December 31, 1997. Any pole attachment or conduit occupancy fees charged by certificated providers of telecommunications services for this use shall be waived for facilities in place as of December 31, 1997, and shall be waived for future extensions in cities with populations between 60,000 and 70,000, so long as the locality or the Commonwealth Transportation Board continues to use these facilities on such poles or in such conduits solely for their internal communications needs. The fee waiver is for the occupancy fees only, does not cover any relocation, rearrangement or other make-ready costs, and does not apply to any county, city or town that has obtained a certificate pursuant to § 56-265.4:4.

(Code 1919, § 4035; 1926, p. 907; 1997, c. 515; 1998, cc. 742, 758; 2002, cc. 479, 489.)

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3-30-16

§ 56-462. Franchise to occupy parks, streets, etc.; imposition of terms, conditions, etc., as to use of streets, etc., and construction thereon.

A. No incorporated city or town shall grant to any such telegraph or telephone corporation the right to erect its poles, wires, or cables, or to lay its conduits upon or beneath its parks, streets, avenues, or alleys until such company shall have first obtained, in the manner prescribed by the laws of this Commonwealth, the franchise to occupy the same. Any city or town may impose upon any such corporation any terms and conditions consistent herewith and supplemental hereto, as to the occupation and use of its parks, streets, avenues, and alleys, and as to the construction and maintenance of the facilities of such company along, over, or under the same, that the city or town may deem expedient and proper. The Commonwealth Transportation Board may also impose upon any such company any terms, rules, regulations, requirements, restrictions and conditions consistent herewith and supplemental hereto, as to the occupation and use of roads and streets in either state highway system, and as to the construction, operation or maintenance of the works along, over, or under the same, which the Board may deem expedient and proper, but not in conflict, in incorporated cities and towns, with any vested contractual rights of any such company with such city or town.

B. No locality or the Commonwealth Transportation Board shall impose any fees on a certificated provider of telecommunications service for the use of public rights-of-way except in the manner prescribed in § 56-468.1; however, the provisions of § 56-468.1 shall not apply to providers of commercial mobile radio services.

C. No locality or the Commonwealth Transportation Board shall impose on certificated providers of telecommunications service, whether by franchise, ordinance or other means, any restrictions or requirements concerning the use of the public rights-of-way (including but not limited to the permitting process; notice, time and location of excavations and repair work; enforcement of the statewide building code; and inspections), which are (i) unfair or unreasonable or (ii) any greater than those imposed on the following users of the public rights-of-way: all providers of telecommunications services and nonpublic providers of cable television, electric, natural gas, water and sanitary sewer services. For purposes of this subsection, "restrictions or requirements concerning the use of the public rights-of-way" shall not include any existing franchise fee or the Public Rights-of-Way Use Fee.

D. Notwithstanding any other provision of law, any permit or other permission required by a locality pursuant to a franchise, ordinance, or other permission to use the public rights-of-way or by the Commonwealth Transportation Board of a certificated provider of telecommunications services to use the public rights-of-way shall be granted or denied within forty-five days from submission and, if denied, accompanied by a written explanation of the reasons the permit was denied and the actions required to cure the denial.

E. No locality receiving directly or indirectly a Public Rights-of-Way Use Fee or the Commonwealth Transportation Board shall require a certificated provider of telecommunications services to provide in-kind services or physical assets as a condition of consent to use public rights-of-way or easements, or in lieu of the Public Rights-of-Way Use Fee. This shall not limit the ability of localities, their authorities or commissions which provide utility services, or the Commonwealth Transportation Board to enter into voluntary pole attachment, conduit occupancy or conduit construction agreements with certificated providers of telecommunications service. Any locality, other than a city or town electing to continue to enforce an existing franchise, ordinance or other form of consent under subsection I of § 56-468.1, or the Commonwealth Transportation Board may continue to use pole attachments and conduits utilized as of December 31, 1997. Any pole attachment or conduit occupancy fees for this use shall be waived for facilities in place as of December 31, 1997, and shall be waived for future extensions in cities with populations between 60,000 and 70,000, so long as the locality or the Commonwealth Transportation Board continues to use these facilities on such poles or in such conduits solely for their internal communications needs. The fee waiver is for the occupancy fees only, does not cover any relocation, rearrangement or other make-ready costs, and does not apply to any county, city or town that has obtained a certificate pursuant to § 56-265.4:4.

(Code 1919, § 4038; 1926, p. 909; 1971, Ex. Sess., c. 40; 1997, cc. 474, 515; 1998, cc. 742, 758; 2002, cc. 479, 489.)

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
REPORTING STARTING AND COMPLETION OF PROJECTS

Appendix 36
Form C-5
Rev. 3-12-13

Date _____

County _____ Residency _____
District _____ Contract I.D. No. _____
State Project No. _____ Federal Project No. _____
PPMS No. _____
Contractor _____

	DATE STARTED	**DATE COMPLETED**
Contract Work		
State Force Account		
Railway Work		
Utilities		

All work on the Agreement Estimate dated _____ was completed _____ and this project is ready for final inspection by the Federal Highway Administration.

The above project was inspected on _____ by _____
Name

_____ and found to be clear of all encroachments except permissible utilities otherwise
Title
noted below.

All entrances have been inspected prior to final acceptance, as set forth in the Construction Manual, and found to be satisfactory except as noted below.
REMARKS OR EXPLANATIONS:

	Yes	No
Right of Way is complete – No outstanding condemnations or expenditures.	☐	☐

Remarks

	Yes	No
Utilities are complete – No outstanding utility billings or expenditures.	☐	☐

Remarks

_____ _____
Area Construction Engineer ***District Administrator***

Copy
State Construction Engineer
Programming Division – Finance Section
Location and Design Engineer
Environmental Division Administrator
Materials Engineer
Right of Way and Utilities Director
Fiscal Manager
Project Manager
Director of Rail, Department of Rail and Public Transportation (R/R Projects Only)
State traffic Engineer
Local Assistance Director
Administrative Services Division Administrator (Capital Outlay Projects Only)
Project Inspector
Contractor (Starting and Completion of Contract Work Only)
Division Administrator, Federal Highway Administration
Information Technology Division (HTRIS)
District Survey Manager

(CONTINUED)

INSTRUCTIONS

This form is to be prepared immediately subsequent to the starting and completion of each phase of work shown hereon.

The statement relative to clearance of encroachments is to be completed on the form reporting final completion

The Area Construction Engineer is to coordinate with Right of Way and Utilities to verify no outstanding condemnations, utility billings or expenditures.

The Area Construction Engineer is to sign and forward the completed form to the District Administrator for review and distribution.

Each successive form is to include all information shown on previous forms and an explanation of the change.

The form bearing notice of final completion is to be signed by the District Administrator.

The Virginia Department of Transportation

Appendix 37

UTILITY RELOCATION AGREEMENT
between
NAME OF DESIGN BUILD FIRM
and
NAME OF UTILITY COMPANY
FOR THE ADJUSTMENT AND/OR RELOCATION OF
UTILITY FACILITIES RELATED TO
PROJECT [NAME/NUMBER]

THIS AGREEMENT, made and entered into as of the _____day of _____, 20__, by and between **UTILITY COMPANY** (hereinafter called **"UTILITY"**) and **DESIGN BUILD FIRM** (hereinafter called **"DB CONTRACTOR"**), individually referred to as a **"Party"** and jointly referred to as the **"Parties"**.

WITNESSETH

WHEREAS, The Virginia Department of Transportation and **DB CONTRACTOR** entered into a Design-Build Contract dated _____, 20__ for the design and construction of the Project which will necessitate changes and/or relocations in **UTILITY'S** facilities; and,

WHEREAS, **DESIGN BUILD FIRM** and **UTILITY COMPANY** wish to agree upon the terms and conditions under which the **UTILITY COMPANY** will make the necessary changes and/or relocations to its existing facilities that are in need of changes and/or relocations to accommodate the Project (the "**Existing Facilities**") and DB CONTRACTOR will reimburse the UTILITY the applicable costs incurred by such changes as hereinafter set forth;

NOW, THEREFORE, in consideration of the premises mutual covenants herein, and in order to consummate the intent of the Parties set forth in the foregoing Recitals, which Recitals are made an integral part of this Agreement, the Parties agree as follows:

(1) Following a utility field inspection conducted by DB CONTRACTOR, the UTILITY shall prepare, in a mutually agreeable timeframe, preliminary plans, a non-betterment estimate, work schedule, and supporting data, providing for the changes to the Existing Facilities which are determined at the utility field inspection or subsequent thereto to be the responsibility of DB CONTRACTOR and necessary to accommodate the construction of the Project. The preliminary plans, non-betterment estimate, work schedule, and supporting data shall be prepared in accordance with the Virginia Department of Transportation's Manual on Utility Relocation Procedures, and any revisions or supplements thereto, and transmitted to DB CONTRACTOR by an authorized representative of the UTILITY. In the event that the Project is cancelled or delayed prior to DB CONTRACTOR's authorization as set forth in Section 2 below, the UTILITY shall be reimbursed for the costs of preparing the preliminary plans, non-

betterment estimate, work schedule, and supporting data within thirty days of UTILITY's request for reimbursement. Upon acceptance and approval, the preliminary plans, non-betterment estimate, work schedule, and supporting data shall become a part of this Agreement as if fully set forth in this Agreement. After acceptance and approval of the preliminary plans, non-betterment estimate, work schedule, and supporting data by DB CONTRACTOR commencement of final design and work shall be authorized by DB CONTRACTOR.

(2) Upon authorization by DB CONTRACTOR of the changed and/or relocated work provided by the final plans, non-betterment estimate, work schedule and supporting data, and after DB CONTRACTOR has completed its prerequisite work on Project to enable the utility work to commence, the UTILITY shall diligently proceed with the work in accordance with the approved plans, non-betterment estimate, work schedule and supporting data. Notwithstanding the foregoing or anything else in this Agreement or the Virginia Department of Transportation's Manual on Utility Relocation Procedures (including any revisions or supplements thereto) to the contrary, the UTILITY shall not be required to commence relocation of any of the Existing Facilities located on private property until it has been granted the real property rights, in form and substance satisfactory to the UTILITY, needed for the relocation of such facilities.

(3) Except as provided herein, the UTILITY shall construct and maintain all utility facilities that fall within the right of way for the Project in accordance with the Virginia Department of Transportation's Land Use Permit Manual, and any revisions or supplements thereto.

(4) The UTILITY shall keep records of its relocation work in accordance with Federal Aid Policy Guide Part 645, Subpart A, and any revisions or supplements thereto. Actual and related indirect costs will be accumulated by the UTILITY and kept in accordance with work order accounting procedures as prescribed by the Federal Energy Regulatory Commission.

(5) DB CONTRACTOR will reimburse UTILITY within thirty days of receipt of UTILITY's billings (which may be submitted as progress billings or one complete final billing) for work performed in accordance with the approved plans, non-betterment estimate, work schedule, and supporting data. Final billing will be made as soon as practical after completion of changed and/or relocated work to facilitate finalizing and closing of the Project. All costs, records and accounts are subject to audit by authorized representatives of DB CONTRACTOR, DEPARTMENT and/or U. S. Department of Transportation prior to payment of final billing. DB CONTRACTOR will not be liable for payment of any bill received more than 12 months after UTILITY is notified in writing that utilities are completed and acceptable to DB CONTRACTOR. During the progress of construction and for a period of three years from the date final payment has been received by the UTILITY, the records pertaining to the adjustment and accounting therefor will be available for inspection by authorized representatives of DB CONTRACTOR, DEPARTMENT and the U.S. Department of Transportation.

(6) Where the facilities of the UTILITY will be within the DEPARTMENT right of way upon the completion of the Project, DB CONTRACTOR will be responsible for ensuring that the DEPARTMENT, upon completion of the work and upon application by the UTILITY, issues a permit (the "**Permit**") to the UTILITY covering the location of such facilities. The facilities of the UTILITY covered under a Permit shall be and remain the property of the UTILITY and no charge shall be made for the use of the highway right of way occupied by the UTILITY.

(7) Prior to the issuance of a Permit, DB CONTRACTOR shall permit the UTILITY, in connection with the work, to trim, cut or clear trees, limbs, undergrowth and other obstructions, under and adjacent to its facilities within the DEPARTMENT right of way, which may endanger or interfere with the efficient operation of the facilities. The extent of and the techniques used in trimming, cutting and clearing shall be mutually agreed upon by authorized representatives of [DB CONTRACTOR and UTILITY.

(8) Prior to the issuance of a Permit, when the facilities of the UTILITY are located within the bounds of DEPARTMENT right of way not currently designated as limited access right of way, the UTILITY'S agents and employees shall at all times have full ingress and egress from its facilities in order to perform routine maintenance of said facilities.

(9) Prior to the issuance of a Permit, when the facilities of the UTILITY are located within the bounds of the designated limited access right of way, the UTILITY will give advance notice to DEPARTMENT's local Resident or District Engineer of any non-emergency maintenance operations to be performed within the designated limited access right of way. If any event applies to construction activities of DB CONTRACTOR and its contractors in respect of the Project, in addition to the prior approval of DEPARTMENT, UTILITY must have the prior approval of CONTRACTOR. When emergency conditions require immediate maintenance operations by the UTILITY, such operations may be performed without advance notice to DEPARTMENT and CONTRACTOR; however, notification shall be given to DEPARTMENT and DB CONTRACTOR by the UTILITY as soon as practicable. The UTILITY, will to the best of its ability, perform all operations within the limited access right of way and all other DEPARTMENT rights of way in a manner which will reduce to a minimum interference to the flow of traffic and disturbance of the roadway, and which will provide a maximum of safety to traffic and to the UTILITY'S forces.

(10) Upon the recording of the documents establishing permanent rights in the name of the UTILITY for the facilities relocated onto private property in accordance with Section 2 of this Agreement and/or the issuance of a Permit to the UTILITY in accordance with Section 6 of this Agreement, as applicable, the UTILITY's existing rights to rights of way from which the Existing Facilities are removed, or which UTILITY's facilities will occupy under a Permit as a result of the

Project, shall be considered relinquished (subject, however, to any rights of others, including those of the Trustee under any mortgage of the UTILITY) .

(11) In the event DB CONTRACTOR should request at any time hereafter that the UTILITY's facilities as adjusted onto DEPARTMENT right of way at DB CONTRACTOR expense be again adjusted when they are on DEPARTMENT right of way, DB CONTRACTOR intends to pay the UTILITY the applicable cost incurred by the UTILITY, including the cost of securing any necessary easements, in accordance with DEPARTMENT policy.

(12) In the event the DEPARTMENT should request at any time hereafter that the UTILITY's facilities which were not adjusted hereunder, but for which the UTILITY'S existing rights to rights of way were relinquished, be adjusted, DEPARTMENT intends to pay the UTILITY the applicable costs incurred by the UTILITY, including the cost of securing any necessary easements, in accordance with DEPARTMENT policy.

(13) This Agreement shall be applicable to utility adjustments for the Project where DEPARTMENT maintains and controls the highway right of way.

(15) Applicable Law - This Agreement, and all amendments and modifications hereof, shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia as to all matters, including validity, construction, effect, performance and remedies, except as to its conflict of law rules.

(16) Assignment – No Party shall voluntarily assign, transfer, sell, pledge, or in any way encumber its interest or part thereof in this Agreement, and each Party shall use its best efforts to prevent the same by operation of law or otherwise. Notwithstanding the foregoing, DB CONTRACTOR shall be entitled to assign its rights, liabilities, and obligations under this Agreement in whole or in part to another Party to the Comprehensive Agreement, or the party's assignees (e.g. Lenders). Such assignee(s) shall assume all of DB CONTRACTOR's rights, liabilities or obligations under this Agreement and DB CONTRACTOR agrees to take all steps necessary to effectuate and ensure the assignees assume DB CONTRACTOR's liabilities or obligations under this Agreement.

(17) Binding Effect - This Agreement shall be binding upon and inure to the benefit of the Parties and their successors, legal representatives, and permitted assignees.

(18) Term – Unless extended in writing by the Parties, this Agreement shall remain in effect until one or more of the following occurs:

a. DB CONTRACTOR provides the UTILITY with written notice that changes and/or relocation of the UTILITY's facilities is not required to accomplish the Project (in which event the UTILITY will be reimbursed

for all costs incurred that would have been otherwise reimbursed under this Agreement up to the date of said notice);

b. UTILITYs work to relocate the necessary facilities is complete and accepted by DB CONTRACTOR; or

c. Mutual agreement of the Parties to terminate this Agreement.

(19) Indemnification - The Parties agree as between themselves that, during the term of this Agreement, each Party (the "Indemnitor") shall release, indemnify, defend, and hold the other Parties and their respective officers, directors, employees and agents harmless from any and all losses, claims, demands, costs, damages, liabilities, joint and several, expenses of any nature (including attorneys' fees and disbursements), judgments, fines, settlements, penalties, and other expenses ("Losses") arising out of or related to the Indemnitor's negligence, gross negligence or willful misconduct except to the extent such Losses are caused by the negligence, gross negligence or willful misconduct of the Party seeking indemnification.

(20) Notices – Any notice, consent, demand or request required or permitted by this Agreement shall be in writing, shall be effective upon receipt, and shall be transmitted by personal delivery, U.S. mail, or confirmed fax transmission, addressed as follows:

Name
Address 1
Address 2
Address 3
City, State Zip
Contact Person
Telephone

CONTRACTOR:

_____
_____
_____
Attn:
Telephone/Fax:

(21) Disputes – A Party shall give notice of any dispute ("**Notice of Dispute**") under this Agreement in writing to the other Parties. Upon receipt of a Notice of Dispute, the Parties will arrange for a meeting or meetings between their designated representatives to attempt to resolve the dispute. The initial meeting shall take place within 21 working days of receipt the Notice of Dispute. Should resolution of the dispute

not be possible within 30 working days of the initial meeting, any Party shall be entitled to proceed in accordance with applicable law.

(22) Interpretation – This Agreement shall be read and construed in a commercially reasonable manner, and the Parties expressly import a covenant of good faith and fair dealing into the relationships hereby created.

(23) Entire Agreement – This Agreement represents the entire agreement between the Parties relating to the UTILITY's facilities and supersedes all prior negotiations, representations and agreements, either written or oral. The Parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding not set forth herein. Any modification or change made subsequent hereto shall not be binding unless in writing and signed by both Parties.

IN WITNESS WHEREOF, each party hereto has caused this Agreement to be executed in duplicate in its name and on its behalf by its duly authorized officer or agent as of the day year first written.

UTILITY:

_____

By: _____
Name:
Title:

DB CONTRACTOR:

_____

By: _____

Name: _____
Title: _____

Appendix 38
3-30-16

Trenchless excavation

This section explains the Department's approach to the design and review of trenchless technologies within VDOT Right-of-Way. The Department encourages trenchless construction for transportation improvements, whereby it is imperative or necessary to limit the impacts to the traveling public, while avoiding lane shutdowns and/or detouring.

The following trenchless construction techniques are recognized as applicable practices to VDOT projects, provided that they meet the relevant needs for the given site conditions:

- Jack and Bore
- Microtunneling
- Horizontal Directional Drilling (HDD)
- Pipe Jacking

The Engineer shall select the appropriate trenchless construction method for the project, and develop the plan accordingly, while taking the following items under consideration:

- Pipe Application
- Pipe Depth
- Pipe Length
- Pipe Diameter
- Pipe Type
- The working space required on the site for both the entry pit and receiving pit, providing sufficient working room for typical construction methods, and obtaining any required R/W to accomplish such
- Existing Soils
- Operator Skill and Experience

The Engineer shall refer to MD-_____in the Manual of Instructions by VDOT's Materials Division for requirements of geotechnical investigations required prior to trenchless pipe applications and/or construction.

The Engineer shall refer to Table 15.1, Allowable Trenchless Applications, to aid in selection of the appropriate trenchless construction method relative to the existing site conditions.

Table 15.1 - Allowable Trenchless Applications

Trenchless Technology	Primary Applications	Depth	Length	Diameter	Pipe Type	Working Space	Soil	Operator Skill
Jack and Bore	Storm Sewer, Utilities	Varies	40-500’	8-60”	Concrete, Steel	Entry and Exit Bore Pits: Length: 25-35’ Width: 10-12’	Varies	High
Microtunneling	Sanitary Sewers, Storm Sewers, Other Pipelines	Varies	100-1,000’	12-120”	Steel, Reinforced Concrete, Clay	Jacking Pit: Length: 50-100’ Width: 20-40’ Smaller Retrieval Pit	Wet Sands for Slurry Method to Sandy Clays for Auger Method	High Skill Level Required to Operate Sophisticated Equipment
Horizontal Directional Drilling (HDD)	Utility Lines, Wide Range of Pipe Sizes	Varies, Based on Pipe Size	Up to 6,000’	2-48”	HDPE, Steel, PVC, FPVC	No Entry and Receiving Pits are Required. A Work Space Should be Provided at Both Ends for Storage and Equipment	Varies	High
Pipe Jacking	Sewers, Pressure Lines, Crossings	Varies	No Theoretical Limit	42-120”	RCP, Steel	Entry and Exit Bore Pits: Length: 25-35’ Width: 10-12’	Sandy Clay, Varies	High

RCP = Reinforced Concrete Pipe; HDPE = High-Density Polyethylene Pipe; PVC = Polyvinyl Chloride Pipe; FPVC = Fusible Polyvinylchloride Pipe

The Engineer shall refer to Chapter 13 of the VDOT Survey Manual to properly locate the existing utilities and underground hazards located at the project site, and within and immediately adjacent to the preferred trenchless construction method. If it is found that there are major obstructions with the proposed location of the bore pits, or drilling path, the Engineer shall plan to either avoid them, or to have those obstructions relocated/removed prior to boring operations.

Based on results of the soils study, the Engineer shall further verify the appropriate drilling technique, based on Table 15.2, Applicability of Trenchless Technologies to Various Soil and Rock Conditions, and Table 15.3, Applicability of Trenchless Technologies to Soil and Rock Types. If it is found that soil conditions may be marginal/possible, where difficulties may occur, the Engineer should make their determination of application, either based on further exploratory analysis, or by instituting their best engineering judgment.

Table 15.2 - Applicability of Trenchless Technologies to Various Soil and Rock Conditions

Soil Conditions	Jack and Bore (Auger Boring)	Micro-tunneling	Horizontal Directional Drilling	Pipe Jacking
Soft to very soft clays, silts, and organic deposits	Y	Y	Y	M
Medium to very stiff clays and silts	Y	Y	Y	Y
Hard clays and highly weathered shales	Y	Y	Y	Y
Very loose to loose sands *above* the water table	M	Y	Y	M
Medium to dense sands *below* the water table	N	Y	Y	N
Medium to dense sands *above* the water table	Y	Y	Y	Y
Gravel and cobbles with a diameter less than 2-4”	Y	Y	M	Y
Soils with significant cobbles, boulders, and obstructions with a diameter more than 4-6”	M	M	M	M
Weathered rocks, marls, chalks, and firmly cemented soils	Y	Y	Y	M
Slightly weathered to unweathered rock	Y	M	M	N

Source: Iseley et al. (1999).
Y = generally used; M = possible, but difficulties may occur; N = generally unsuitable.

Table 15.3 – Applicability of Trenchless Technologies to Soil and Rock Types

Soil Type	N Value (Standard Penetration Test Value, per ASTM D1452)	Jack and Bore (Auger Boring)	Micro-tunneling	Horizontal Directional Drilling	Pipe Jacking
Cohesive Soils (clay)	N < 5 (Soft)	M	Y	M	M
	N = 5-15 (Firm)	Y	Y	Y	Y
	N > 15 (Stiff – Hard)	Y	Y	Y	Y
Cohesionless Soils (sand/silt)	N < 10 (Loose)	M	Y	M	M
	N = 10-30 (Medium)	Y	Y	Y	Y
	N > 30 (Dense)	Y	Y	Y	Y
	High Groundwater	N	Y	M	M
Boulders/cobbles		</= 33% D	</= 33% D	M	M
Full-face rock		</= 12 ksi	</= 30 ksi	</= 15 ksi	</= 30 ksi

Source: Iseley et al. (1999).
Y = generally used; M = possible, but difficulties may occur; N = generally unsuitable.

The Engineer will confirm and document that the Utility has had the opportunity to concur with the trenchless construction method(s) specified, based on local conditions and business need.

Boring applications that follow the resulting criteria, shall be deemed as “high-risk” by the Department, and shall be reviewed and approved by the VDOT District Engineer, and District Materials Engineer, prior to application acceptance:

- Proposed pipe diameter (external) 24” and greater; and
- Pipe cover less than three times (3 x D) the pipe diameter; and
- ADT greater than 25,000 vehicles per day; or
- Proposed pipe diameter (external) 60” and greater; or
- Any other situation where there is significant risk (as interpreted by the Department).

For Land Use Permit Applications, trenchless construction will be given a conditional approval, as long as the application includes the criteria listed above, and the applicant's contractor has the minimum required experience as detailed in the Special Provisions available at VDOT's Construction Division. It shall be further noted that the Department requires a minimum five (5) years experience of all contractors for the work product that they are intending to perform, and a minimum of ten (10) years experience, specifically for steel applications.

The Engineer will provide and engineer's seal and signature, providing acknowledgement and approval of the method(s) specified.