

DELAWARE DEPARTMENT OF TRANSPORTATION

Transportation Solutions

Utilities Manual

2007 Edition

UTILITIES MANUAL PREFACE

It is in the public interest for utility installations to be accommodated on the rights-of-way of state highways. However, since this accommodation can significantly affect the function of the highways, utility occupancy and use of the rights-of-way must be regulated to ensure that:

- traffic flows freely and safely,
- the maintenance and future expansion of the highways is provided for, and
- applicable federal, State, and local laws are complied with.

This *Utilities Design Manual* presents the practices, policies, and procedures governing the installation, adjustment, and maintenance of utility lines and appurtenances within the rights-of-way of Delaware's highways. It establishes the legal and working relationships between the Delaware Department of Transportation (DelDOT) and the utility owners and contractors. It describes how public utilities may be accommodated along or within the rights-of-way of State-controlled highways and State-maintained streets and roads within suburban developments or within the incorporated limits of a municipality.

The manual is to be used by DelDOT personnel, public utility employees, contractors, and other agencies involved with or affected by the design, construction, adjustment, relocation, or maintenance of underground, surface, or overhead facilities.

Such closely related subjects as rights-of-way, legal interpretations, plans, and construction may of necessity be touched upon in this manual but are not covered in detail. Technological advances may affect some requirements concerning utility installations and require changes to some methods and procedures.

A record will be maintained of the distribution of this manual, enabling DelDOT to distribute future changes electronically to each manual user to ensure currency of information. Users must be responsible for inserting the revisions and additions as soon as they are received.

This version of the Delaware Department of Transportation Utilities Manual is based upon the Utilities Manual published by the Delaware Registrar of Regulations May 1, 2007 and replaces all previous utilities manuals issued by the Department. Section numbering and formatting have been revised from the Registrar's version to enhance ease of use. All section numbering employed in the Registrar's publication is shown in parentheses if otherwise not in use. In questions regarding content, the Registrar's publication is the official reference.

DELDOT UTILITIES MANUAL

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Chapter 1

Introduction

The Mission of the State of Delaware's Department of Transportation is to provide a safe, efficient, and environmentally sensitive transportation network that offers a variety of convenient and cost-effective choices for the movement of people and goods.

Effective management and design of utility installations are imperative for the safe and expedient construction and maintenance of the transportation network. Close coordination with utility owners is essential to meet these objectives.

This manual outlines the general practices, policies, and procedures that affect the relationship between the Delaware Department of Transportation, hereafter referred to as the Department or DelDOT, and those entities desiring to place utility lines and appurtenances within the rights-of-way of this State. This manual explains the requirements and procedures necessary to facilitate utility installation, relocation, maintenance as well as any utility work in conjunction with highway project construction within Department right-of-way.

1.1 PURPOSE AND OBJECTIVES

(1.1.1) The overriding goal for this manual is to allow the user to locate and understand those regulations and procedures that are most pertinent to their activities in the highway-utilities process. The process embraces a large and exceedingly complex series of issues. This manual simplifies and condenses these issues for ease of location by the user.

(1.1.2) The manual has been prepared to accomplish these objectives:

- to provide standard arrangements for permitting the installation of utilities on Department rights-of-way and for relocating utilities due to highway construction;
- to help utilities accomplish their work with the least delay and minimum interference with highway contractors or other utilities;
- to prevent service disruptions, damage to utility facilities, and hazardous conditions;
- to ensure that standards, specifications, and environmental considerations are met;
- to ensure the proper performance, high quality, and timely accomplishment of utility work, as well as the correct and timely reimbursement to utility companies when appropriate;

- to outline procedures and conditions that must be met for federal reimbursement, when utility work is part of a federal-aid project; and
- to outline procedures and conditions necessary for state reimbursement of utility work when circumstances, agreements and/or Delaware Code govern.

(1.1.3) The information in this manual applies to all public and some private facilities, including (but not limited to) electric power, telephone, telegraph, communications, cable TV, lighting, water, gas, oil, petroleum, steam, chemicals, sewage, drainage, irrigation, and similar lines that are located within the rights-of-way of highways under the Department's jurisdiction. Underground, surface, and overhead facilities-whether singular or in combination-are covered by this manual.

1.2 STATUTORY AUTHORITY

(1.2.1) The Delaware Code provides the Department with the authority and responsibility to regulate the use of all utilities on state highway rights-of-way. For the benefit of the reader, this manual reviews applicable portions of Delaware law.

(1.2.2) The Department has the sole legal authority to control the use of state highway rights-of-way. Vesting this control in a single agency was necessary to ensure the safety of motorists and the proper operation of highway facilities. The Department has formulated the guidelines, policies, and procedures in this manual as tools for regulating utilities to achieve the aforementioned purposes.

(1.2.3) The "Delaware State Highway Department" was established into law on April 2, 1917. Chapter 166 of the 1935 Code amended the original Act that created the Highway Department. Additional amendments, including Title 17 of Delaware Code, were enacted by the Legislature on February 11, 1953, and approved by the governor on February 12, 1953, including all prior amendments. This act provides authorization for the State to participate in the acquisition of rights-of-way, the placement of new utilities, and the adjustment of existing utilities.

(1.2.4) Title 26 of the Delaware Code (1953) provides authorization for the State to control new installations of pipes, conduits, and wires above or beneath the public roads.

(1.2.5) Section 143, Title 17, Delaware Code, established by law on January 16, 1962, made the State responsible for the entire cost of altering or relocating utilities that are within public highway rights-of-way-when the utility facilities are owned or operated by a municipality, governmental body, or subdivision of the State-as necessitated by highway construction, reconstruction, relocation, repair, or maintenance.

(1.2.6) Section 132, Title 17, Delaware Code (1966) provides for the State to reimburse the owner for the expense of relocating public utility facilities necessitated by any project where the State is to be reimbursed at least 90% of the project cost from federal funds or by the federal government or any agency thereof. Such expense is to be the amount paid by the owner that is properly attributable to the relocation, after deducting therefrom any increase in the value of the new facilities and any salvage value derived from the old facilities.

(1.2.7) Section 143, Title 17, Delaware Code, amended on June 29, 2004, allows the Department of Transportation flexibility to negotiate alteration or relocation agreements with public utilities in order to improve efficiency and fairness. While not required to do so, the Department may choose to enter into an agreement with a public utility for this purpose.

(1.2.8) The opinion of the Court of Chancery, State of Delaware (1963) is the basis on which the State reimburses utility owners the expense of relocating public utility facilities on rights-of-way for which they hold title, or have permission or easement for occupancy, as necessitated by any project.

(1.2.9) Adherence to the policies, practices and procedures of the Department of Transportation- and, more specifically, to the requirements described in the Utilities Manual- must be undertaken with full knowledge of, and compliance with, Chapter 8, Title 26, of the Delaware Code entitled "Underground Utility Damage Prevention and Safety." The Department's commitment to provide for the protection of public health and safety is of major importance and must be maintained at all times.

1.3 CONSTRUCTION AND LOCATION REQUIREMENTS

The State reserves the right to review and approve the detailed location and design of all utility installations, adjustments, or relocations affecting the highway rights-of-way, and will issue permits for proposed utility work. Chapter 3 describes permitting requirements.

1.4 EXCEPTIONS TO REQUIREMENTS

The utility company shall submit any request, for deviation from the standards described in this manual, due to extreme hardship, to the Department. The request shall be in writing and must include full justification surrounding the hardship. The Department will assess the situation and provide recommendations. The documentation will be sent to the Utilities Engineer for coordination and comment, who shall then forward it to the Chief Engineer for final action.

1.5 TRANSMITTAL OF INFORMATION

Where the manual specifies the submittal of plans or other documents, utilities are encouraged to submit electronic files with the Department's approval. If utilities choose to submit plans or other documents electronically, their systems and GIS databases must be compatible with DelDOT's current systems in order to transfer files electronically.

DELDOT UTILITIES MANUAL

Chapter 2

Definitions

AASHTO: American Association of State Highway and Transportation Officials. AASHTO is a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail and water. Its primary goal is to foster the development, operation and maintenance of an integrated national transportation system.

Active Federal-aid Highway Projects: Projects for which any phase of development has been programmed for federal aid highway funds and the State controls the highway rights-of-way. A project will be considered active until the date of its final acceptance by the Federal Highway Administration and thereafter will be considered complete.

Adjustment: The relocation, removal, replacement, abandonment, etc., of existing utility facilities as necessitated by a highway construction project.

Agreement: A legal instrument entered into by the Department and a utility on a highway construction project which outlines the legal and financial responsibilities of both parties.

Arterial Roadway: The functional classification for partial-access-control roads that serve to distribute traffic and are moderate in speed. Arterials carry traffic between collector roads and freeways. The DelDOT highway system map designates which roadways are arterials.

Authorization: Permission by the applicable District Engineer, Construction Region Engineer or Utilities Engineer for the utility to proceed with any phase of a project.

Backfill: Material used to replace or the act of replacing material removed during construction; also may denote material placed or the act of placing material adjacent to structures.

Bar Chart: A schedule showing the proposed start and end dates for various utility activities on a complex singular contract or project. DelDOT prepares the Bar Chart based upon the Utility Statements submitted by the utilities.

Betterment: Any upgrade of the facility being relocated made solely for the benefit of and at the election of the utility, not attributable to highway construction, as determined by the Utilities Engineer.

Boring: The operation by which large carriers or casings are jacked through oversize bores. The bores are carved progressively ahead of the leading edge of the advancing pipe as soil is mucked back through the pipe.

Casing: A larger pipe, conduit, or duct enclosing a carrier. Casings are installed in open cuts or by boring or driving. They are usually sealed at the ends and sometimes vented when the pipelines carry lighter-than-air gases. Casings are usually required to avoid the need for trenching through existing pavements, to prevent the destruction of the roadway due to leakage of liquids under pressure, or to prevent or contain leaking under pressure.

Chief Engineer: Shall be a civil engineer registered or eligible for registration as such in Delaware and qualified to design as well as direct road engineering work as specified in the Delaware Code.

Clear Roadside Policy: The Department's policy of providing a clear recovery area (clear zone) so as to increase safety, improve traffic operations, and enhance the aesthetic quality of highways by designing, constructing, and maintaining highway roadsides as wide, flat, and with no abrupt changes in slope as practical and as free as practical from natural or manufactured hazards such as trees, drainage structures, non-yielding sign supports, highway lighting supports, utility poles, and other ground-mounted structures. The policy addresses the removal of roadside obstacles that are likely to be associated with accident or injury to highway users. However, when such obstacles are essential, the policy provides for appropriate countermeasures to reduce hazards. Countermeasures include placing utility facilities at locations that shield the hazard from out-of-control vehicles by using breakaway features, impact attenuation devices, or shielding. Full consideration is to be given to sound engineering principles and economic factors in all cases. See the *DelDOT Road Design Manual* and the *AASHTO Roadside Design Guide* for more details.

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 a clear run-out area clear of fixed or non-traversable objects. The purpose is to provide errant vehicles a reasonable opportunity to stop safely or otherwise regain control of the vehicle. The desired width is dependent upon the traffic volumes and speeds, and on the roadside geometry. See the *DelDOT Road Design Manual* and the *AASHTO Roadside Design Guide* for calculation of Clear Zone widths.

Code of Federal Regulations, Title 23, Part 645: The current regulations on utility relocations. Subpart "A" defines policy, procedure, and cost development for utility relocation, adjustments, and reimbursement. Subpart "B" defines policy and procedure for accommodating utility facilities on federal-aid highways.

Collector Roadway: The functional classification for partial-access-control roads. Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials. The DelDOT highway system map designates which roadways are collectors.

Conduit: An enclosed tubular casing, singular or multiple, for the protection of wires, cables, or lines, usually jacketed and often extended from manhole to manhole.

Conflict: Exists when a utility is in the way of highway construction or maintenance operations and needs adjustment or relocation. The presence of utilities in the right-of-way does not necessarily constitute a conflict.

Coordination Meeting: Periodic meeting attended by representatives of utilities, for the purpose of informing those utilities of current policy and procedures and for discussing current topics of general interest.

Construction: The actual building and all related work, including relocation or adjustments, incidental to the construction or reconstruction of a highway project-except for preliminary engineering, Subsurface Utility Engineering, test holes, or rights-of-way work which is programmed and authorized as a separate phase of work.

Construction Plans: The large scale-usually 1 inch = 30 feet-plan sheets which show the highway project in detail.

Consultant: A registered professional engineer engaged by the Department of Transportation, State of Delaware, or a utility, to develop plans, specifications, and estimates for the Department or for a utility.

Control of Access: The condition where the right of owners or occupants of abutting land or other persons to access, light, air, or view in connection with a highway is fully or partially controlled by public authority.

- Full control of access means that the authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only, by prohibiting at-grade crossings and direct private driveway connections.
- Partial control of access means that the authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some at-grade crossings and private driveway connections.

Corner Cut (Daylight Corner): A right-of-way area at an intersection reserved for sight clearance and/or turning clearance, usually by a diagonal right-of-way line.

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, Replacement: The remaining portion of the total cost of the relocation of a facility after deducting therefrom the cost of betterment, credit for salvage, and expired service life credit.

Cost, Right-of-Way: The cost of land and interests to the acquisition of land or interest in land required for the relocation of the utility facility.

Cost of Salvage: The amount expended to restore salvaged utility property to usable condition after its removal.

Costs, Overhead or Indirect: 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.

Cover: Depth to top of pipe, conduit, casing, cable or similar line or utility tunnel below the earth or roadway surface. It is normally referenced from the bottom of the highway ditch.

Department: Department of Transportation, State of Delaware (DelDOT).

Designation: The process of using a surface geophysical method or methods to interpret the presence of a subsurface utility and to mark its approximate horizontal position (its designation) on the ground surface.

Designer: The Department employee engaged in the design of a highway project, or the outside engineering consulting firm hired by the Department for that purpose.

Direct Burial: Installing a utility underground without encasement.

District Engineer: District Engineer of North, Canal, Central, or South District. The Engineer that is the highest authority in a district.

District Public Works Section: The unit within each district that is responsible for utility operations under the direction of the District Engineer.

Duct: An enclosed tubular casing for protecting wires, lines, or cables, often flexible or semi-rigid.

Eligibility: The costs incurred on a project or a specific phase of a project that, when authorized, may be reimbursable provided they are legally qualified under the applicable State Highway Laws.

Emergency: A situation where the safety of the traveling public or general public, or the structural integrity of the highway facility, is placed in immediate danger (as defined in the Delaware Code, Title 26, Chapter 8-the "Miss Utility Law").

Encasement: A structural element that surrounds a carrier or casing.

Expired Service Life Credit: In any instance where the relocation involves the substitution of a replacement facility for an existing facility, a determination shall be made by the Department whether a credit is due to the project for the value of the expired service life of the facility being replaced. Such credit shall take into account the effect of such factors as wear and tear, action of the elements, and functional or economic obsolescence of the existing facility, not restored by maintenance during the years prior to the relocation.

Expressway: A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections. (See "Freeway.")

Federal-Aid Coordinator: Maintains liaison with the Federal Highway Administration, insofar as fiscal matters are concerned, if federal monies are involved in the utility adjustment.

Federal-Aid Highway Projects: Active or completed projects administered by or through DelDOT, involving 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.

Federal Highway Administration (FHWA): Highway agency of the U.S. Department of Transportation.

Final Billing: The detailed summary of the actual costs incurred by the utility on their relocation including the documentation necessary to verify the amounts expended.

Fixed or Non-traversable Objects: Existing or planned objects, whether natural or manufactured, such as trees, drainage structures, non-yielding sign or lighting structures, drainage ditches, retaining walls, rock outcroppings, utility facilities, etc.

Force Account Basis: Utility work performed by the utility's own forces with reimbursement at actual cost.

Freeway: An expressway (divided arterial highway) with full control of access.

Highway, Street or Road: Any public way for vehicular travel, including the entire area within the rights-of-way and related facilities.

Highway Construction Project: The construction, reconstruction, widening, or resurfacing of a State Highway, within the existing legal right-of-way or within a new required right-of-way, by contract or by Department forces or agent of the Department.

Highway Right-of-Way: Real property or interests therein, acquired, dedicated, or reserved for the construction, operation, and maintenance of a highway. Lands acquired under Section 319(b), Title 23, U.S.C. (Scenic strips 1965 Highway Beautification Act) shall be considered to be under the jurisdiction of the Department.

Horizontal Clearance: As stated in the *DelDOT Road Design Manual*; the lateral distance from edge of traveled way to a roadside feature or object for a roadway with barrier curb. Roadways having curbed sections should be provided with a minimum horizontal clearance of 1.5 feet beyond the face of curb, with wider offsets (if possible to the full clear zone width) provided where practical since most types of curbs provide little help in redirecting an errant vehicle. Please see the *DelDOT Road Design Manual* and the *AASHTO Green Book* for more information regarding horizontal clearance.

Initial Payment: First relocation payment to the utility by the Department under the terms of a reimbursement agreement.

Interim Payment (Periodic Billing): Reimbursement by the Department to the utility, either in specified minimum amounts or definite billing periods, as invoices for completed relocation work are submitted, whenever provided for in the reimbursement agreement.

Jacking: The pushing of a sleeve or casing pipe under a highway to make an underground utility crossing without disturbing the roadbed by open trenching.

Manhole (Utility Access Hole): An opening in an underground system which workers may enter for the purpose of making installations, removals, inspections, repairs, connections, and tests.

Master Franchise: The legal document that authorizes a regulated Public Utility to place its facilities within State rights-of-way, without any vested interest therein, under the provisions of Delaware Code 1953, Title 17, and supplements thereto.

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

Non-participating: Whenever utility relocations are not programmed with FHWA for reimbursement to the Department from federal funds, they are called "non-participating." Project design, right-of-way acquisition, and construction can be "participating," while utility relocations can be "non-participating." Particular utility relocations may be handled as "non-participating" on a federal-aid project, even when other utility relocation work on the same project is programmed as "participating."

Offset: A. Surveying offset - A distance measured at right angles from the centerline of a highway to a specific point. B. Roadway offset - A measured distance along the centerline of a highway in feet from an established segment.

Participating: Refers to utility adjustments or relocations performed after work has been programmed with and authorized by FHWA. Such funds are requested by the State at the pro-rata share applicable for the project where FHWA requirements are met by the Department and the utility.

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

- Flexible Pipe - A plastic, fiberglass, or metallic pipe having large ratio of diameter to wall thickness, which can be deformed without undue stress.
- Rigid Pipe - Pipe designed for diametric deflection of less than one percent.
- Semi-Rigid Pipe - Pipe designed to tolerate from one percent to three percent diametric deflection.

Plan Sheet Index: The small-scale highway plan sheet, usually sheet number two, showing the entire project.

Preliminary Engineering (PE) Estimate: Estimate of the preliminary engineering required to design the alteration, adjustments and/or relocation.

Preliminary Engineering (PE): The making of surveys, the preparation of utility plans, specifications, estimates (PS&E) and other related preparatory work in advance of construction operations.

Prior Rights: Exist when a utility is determined to have legally occupied a public right-of-way prior to the time such right-of-way was conveyed to or acquired by the State of Delaware's Department of Transportation.

Private Lines: Privately owned facilities that convey or transmit utility commodities devoted exclusively to private use.

Private Right-of-Way: Lands in which utilities have a real property interest for the purpose of distributing or transmitting service. This term, when used for determining eligibility for reimbursement,

shall mean any area outside of a public right-of-way, except lands owned by the State that are occupied by right of a license.

Private Right-of-Way Status: Facilities located within the right-of-way regarded by the Department as having private rights for the purpose of determining liability for relocation costs in the event of further relocation. In this situation, the Department is responsible for paying relocation costs or for providing substitute right-of-way.

Project Manager: The DelDOT staff member responsible and accountable for satisfactory completion of the construction project.

Prorated Shares: The percentages of financial responsibility of the utility and the Department on a utility relocation necessitated by a highway construction project. Generally, proration is based on the original location of utility facilities.

PS&E: Stands for "plans, specifications, and estimates."

Public Right-of-way: The legal right-of-way of any public highway, street, road, or alley that is under the jurisdiction of the Department or any municipality or political subdivision. Law also designates certain navigable waterways as public rights-of-way.

Public Utility: 'public utility' means a utility as defined in 26 Del.C. §102(2) and (4) per the Delaware Code §143, Title 17. A private business organization, subject to governmental regulation, that provides an essential commodity or service, such as water, gas, electricity, wastewater, or telecommunications, to the public.

Real Property Interest Document: Evidence of the utility's title to a compensable real property interest.

Reimburse and Participate (or their derivatives): Shall mean that State funds may be used to repay the utility to the extent provided by law.

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.

Replacement Facility: The replacement of the function of a facility rather than installing a replica facility.

Required Right-of-Way: Private property to be acquired by the Department for highway purposes by amicable settlement or by Eminent Domain proceedings.

Right-of-Way: Real property, or interests therein, acquired, dedicated, or reserved for the construction, operation, and maintenance of a highway, road, or street.

Right-of-Way Certificate: A contract document that certifies that the right-of-way necessary to construct the project is available.

Roadside: A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

Roadway: In general, the portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways. In construction specifications, the portion of a highway within the limits of construction.

Sacrificed Life: A reimbursable charge in the amount of the computed value of the unused life of a facility removed from private property and not functionally replaced.

Salvage: The material removed and used or placed in storage for future use.

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.

Scrap: Material that is not suitable for reuse and which is removed by the utility and sold, for which the State will receive proper credit.

Service Connection: A line from a utility's main distribution line to the premises served, sometimes privately owned.

Single-pole Construction: Use of single poles to support aerial facilities rather than double-pole arrangements such as H-frames.

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

Standard Construction Details: The DelDOT Standard Construction Details in effect on the date work commenced. The Details can be found at the following Web address: <http://www.deldot.gov/static/publications/forms.html>.

Standard Specifications: The *Standard Specifications for Road and Bridge Construction* of DelDOT, in effect on the date work commenced. The Specifications can be found at the following Web address: <http://www.deldot.gov/static/publications/forms.html>

State: Department of Transportation, (DelDOT), State of Delaware.

Test Hole Locating: The locating, through the use of test holes, of underground utility facilities. The entire procedure includes surveying and providing data for the top and bottom of the located facility as well as the existing ground at the site; tying vertical controls to a minimum of the two checked bench marks or available datum; properly backfilling the test holes and restoring the pavement to an acceptable condition approved by the Department; and providing data on Department plans as may be required.

Total Estimated Service Life of the Replaced Facility: The sum of the period of actual use plus the period of expectant remaining life. In instances where such a facility is still in operation but fully depreciated on the utility accounts, there shall be a mutual determination by the interested parties to establish the expected remaining life of the replaced facility.

Traveled Way (or Travelway): The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Use and Occupancy Agreement: The document (written agreement or permit) by which the Department approves the use and occupancy of highway right-of-way by utility facilities or private lines.

Utility Coordinator: Coordinates the relocation or adjustment of all utilities between the utility and the Department of Transportation, State of Delaware.

Utilities Engineer: The Engineer and authorized Representative of the Chief Engineer responsible for utility coordination work performed within DelDOT Transportation Solutions, Engineering Support.

Utilities Section: The unit within DelDOT Transportation Solutions, Engineering Support responsible for matters concerning utilities under the direction of the Utilities Engineer.

Utility Clearance: The arrangements by the utilities to accommodate the highway construction project. It does not indicate that the utility facilities are actually removed from the area but that facilities have been either adjusted to accommodate construction or that arrangements have been made to coordinate the relocation work with the highway contractor's operations.

Utility Construction Permit: A permit that authorizes a utility to construct, maintain, or repair a utility facility within State rights-of-way.

Utility Design Meetings: Utility-DelDOT meetings held to discuss utility relocations on specific highway construction projects. Usually, two such meetings are held on each project, the initial meeting to discuss probable relocation schemes and the final meeting to review relocations for inclusion in the highway plans.

Utility Plans, Specifications and Estimate (Utility PS&E): The detailed relocation cost estimate, prepared by the utility, consisting of highway plan sheets marked to show the relocation and any additional utility drawings or supplemental sheets that are necessary to provide a clear picture of the work to be performed and how the estimated costs were determined.

Utility Statement: A synopsis of utility relocation work and its anticipated schedule that is incorporated in the bid package upon approval by the Department. (See Section 5.1.4)]

Verification of Facilities: The furnishing of information by the utility to verify the type, size, and location of facilities for the mutual benefit of both parties. It is intended that this may be accomplished at nominal cost to the utility, e.g., through maps, records, etc.

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.

DELDOT UTILITIES MANUAL

Chapter 3

Design Requirements

The requirements presented in this chapter apply to the location and design of all utility installations within the highway rights-of-way.

3.1 TYPES OF WORK

There are two distinct types of utility work in highway rights-of-way:

3.1.1 PERMIT AND NEW SERVICE INSTALLATION WORK.

This work usually encompasses the maintenance of existing utility facilities or the installation of new services or utility distribution facilities. The appropriate District Public Works staff issues the permits and inspects the work.

The purpose of the permit is to alert DelDOT that the work is taking place, so that DelDOT can review the traffic control, proposed locations and design and inspect the work to ensure the integrity of the roadway.

3.1.2 PROJECT DESIGN AND FACILITY RELOCATION WORK.

This work results from highway construction projects where it is necessary to relocate utility facilities. Project design work is coordinated through the Utilities Engineer and the Utilities Section. A permit is usually not required for this type of work because the highway construction project supervisor inspects the work. However, a permit is required for utility work in advance of construction where DelDOT Construction is not yet assigned to the project. The permit is processed via the District Public Works office. A permit is also required for preliminary test holes for the location of utilities unless the District waives the requirement.

Traffic control for project design work is coordinated with the highway contractor, the highway construction project supervisor and the Construction District to ensure proper safety standards are employed.

The District Public Works Section administers permit work in its district. The Construction Group Engineer administers highway construction projects. The Chief Engineer and the Assistant

Director of Project Development are responsible for the project design. Any situations that cannot be resolved through the normal process may be forwarded to the appropriate authority.

3.2 HIGHWAY SAFETY AND TRAFFIC CONTROL

The Department considers highway safety a high priority that is an essential and indispensable component of every project from planning through the design and construction phases. Therefore, companies that install, maintain, service, operate, or otherwise work upon utilities within highway rights-of-way are always obligated to consider the safety of the general public. This includes providing appropriate traffic control within work areas.

3.2.1 TRAFFIC CONTROL

All reasonable measures shall be taken for the protection and safe operation of traffic during and after installation of facilities. For all utility maintenance or construction operations within public highway rights-of-way:

1. (3.2.1.1) All traffic control shall conform to the requirements specified in the most current DelDOT manual *Traffic Controls for Streets and Highways Construction, Maintenance, and Utility Operations* ("*Traffic Control Manual*") and any other applicable State and federal regulations.
2. (3.2.1.2) A traffic control plan, referencing the *Traffic Control Manual*, must be submitted and approved whenever a permit is required.
3. (3.2.1.3) Failure by a utility to provide for traffic safety will be cause for immediate suspension of operations. The work will not be allowed to continue until the District is satisfied that proper traffic control is established.
4. (3.2.1.4) If there are any discrepancies between the *Manual on Uniform Traffic Control Devices (MUTCD)* and the *Traffic Control Manual*, the DelDOT Safety Section shall be contacted for clarification. In all questions of interpretations of the *MUTCD* and the *Traffic Control Manual*, the judgment of the Chief Traffic Engineer shall be final. The protection prescribed for each situation shall be based on the speed and volume of traffic, duration of operation and exposure to hazards. The term "street" refers to all the streets in any municipality, including cities, towns, villages, or other local jurisdictions.

3.2.2 TRAFFIC CONTROL AND SAFETY REFERENCES

(3.2.2.1) Title 17 of the Delaware Code provides for the establishment of traffic control and safety standards to be observed during utility construction and maintenance operations on or adjoining any public highway, road, or street. Public and private utilities, contractors under contract with utility companies, and all others engaged in utility construction and maintenance are required to comply with these standards.

(3.2.2.2) The *Traffic Control Manual* explains in detail the principles and requirements of traffic control and safety standards. It covers traffic control procedures, responsibilities of involved parties, required training for personnel, and descriptions of approved control devices.

(3.2.2.3) Responsible utility officials are strongly encouraged to obtain the *Traffic Control Manual*, study its contents, and make copies available to their field supervisors. The *Traffic Control Manual* can be found online at:

http://www.deldot.gov/static/publications_forms.shtml.

The standards are to be implemented through the training and supervision of utility employees. Failure to meet standards will result in stoppage of work until deficiencies are brought into compliance.

(3.2.2.4) All workers within state right-of-way shall have high visibility safety apparel that meets ANSI 107-2004 standard requirements. This apparel will meet the standard performance for Class 2 risk exposure. The apparel background material color shall be fluorescent yellow-green as defined in the standard. The reflective material shall be either orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1000'. For nighttime work, apparel meeting standard performance for Class 3 risk exposure is recommended.

3.2.3 TRAFFIC CONTROL PLAN

(3.2.3.1) The traffic control plan is an important aspect of the project. It shall be prepared by qualified individuals and understood by all affected parties before work begins. In preparing the traffic control plan; the sample cases in the *Traffic Control Manual* shall be followed. The plan must be submitted or traffic control case identified when applying to the District Office for a construction permit. If utility officials need to veer from standard case studies, an ATSSA Certified Traffic Control Supervisor must submit changes to DelDOT Safety for approval prior to applying for the permit.

(3.2.3.2) The utility work shall not begin until the District approvals have been obtained and the approved permit information including traffic control are on the job site. Once the job has begun, the utility inspectors must ensure that the plan is followed throughout the project.

In the case of emergency work where there is no prior approval of a traffic control plan; the utility is still required to follow the DelDOT *Traffic Control Manual*.

The requirement for a utility traffic control plan may be waived on construction projects when the utility adjustments are made simultaneously with the highway contractor's operations and the highway contractor provides the traffic control. Under these circumstances, the utility and highway contractor must cooperate and coordinate their work so that neither is delayed by the other's operation. See Section 5.4.2.3.

3.2.4 FLAGGERS AND TRAFFIC CONTROL

3.2.4.1 Flaggers are essential in controlling traffic when one lane is closed and motorists must alternately use the remaining lane. Other important assignments for flaggers are necessary in utility work, such as lane closures for equipment passage, the pulling of cable crossings, and the control of traffic speed.

3.2.4.2 The Department has specific requirements for flagger warning signs, safety clothing, training, and associated flagger concerns, as described in the *Traffic Control Manual*. Utility supervisors are expected to understand and abide by these requirements. Flaggers are required to be ATSSA certified, expected to be alert, and to know the correct way to stop traffic, slow it down, and keep it moving.

3.2.5 INSPECTION OF TRAFFIC CONTROL

Routine inspections of traffic control elements must be made to ensure acceptable levels of operation. Inspections will be performed by trained District personnel and shall be accomplished at a frequency corresponding to the magnitude of the:

1. (3.2.5.1) utility activity,
2. (3.2.5.2) traffic volumes, and
3. (3.2.5.3) other contributing factors.

When a utility or utility contractor fails to follow the approved traffic control plan, inspectors will suspend the work until the required traffic control is in place. Failure to follow the traffic control plan violates 21 Del.C. §4105 and is subject to punishment by law.

3.3 LOCATION OF UTILITY FACILITIES

In planning utility locations on highway rights-of-way, consideration must be given at all times to sound engineering principles, public safety, and economic benefits to the State. The planning must consider safety, the visual quality of the highway, and efficiency of maintenance.

3.3.1 CONSIDERATIONS

Specifically, the following items must be considered:

1. (3.3.1.1) **Minimize future project interference.** New utility facilities shall be located to minimize the need for later adjustments to accommodate future highway improvements or other utility installations. The location should allow for adequate access to the facilities and accommodate future maintenance. In addition to meeting with DelDOT to discuss future projects, the following are sources to check on projects:
 - The Capital Transportation Program (CTP):
 - Wilmington Area Planning Council (WILMAPCO):
<http://www.wilmapco.org/RTP/index.htm>
 - The Statewide Long Range Transportation Plan
 - Dover/Kent County Metropolitan Planning Organization (MPO)
2. (3.3.1.2) **Minimize future interference to traffic.** Consider methods to maintain utility facilities with minimum interference to highway traffic.
3. (3.3.1.3) **Preserve safe traffic operation and future space.** New longitudinal installations shall be located on a uniform alignment as near as practicable to the right-of-way line and outside the clear zone to provide a safe environment for traffic operation and preserve space for future highway improvements or other utility installations.

4. (3.3.1.4) **Comply with ADA.** The location of utility facilities and appurtenances shall be in accordance with the Americans With Disabilities Act.
5. (3.3.1.5) **Allow only Perpendicular Crossings.** Utility lines shall cross the highway on a line generally perpendicular to the highway alignment.
6. (3.3.1.6) **Consider utility facility's ownership, operation, and maintenance methods** for all facilities that it installs within the boundaries of the right-of-way as well as private underground services or other facilities.
7. (3.3.1.7) **Comply with Clearances and Clear Zone policies.** Conform to horizontal and vertical clearances of aboveground utility lines with the "clear zone" roadside policies applicable to the system and the particular highway section involved. The locations of aboveground utility facilities shall be consistent with the clearances applicable to all roadside obstacles for the type of highway involved. See Section 2 for the definitions of "clear roadside policy", "clear zone" and "horizontal clearances."

Clear zones are established for new construction and major reconstruction projects. Clear zones on other existing roadways may be less than desirable. Utilities shall check with District Public Works to determine the clear zone widths for specific locations for utility work performed under permits. The calculation of clear zone widths is explained in DelDOT's *Road Design Manual* and the AASHTO *Roadside Design Guide*.

If there is no feasible alternative to locating appurtenances within the clear zone, the appurtenances (including fire hydrants) must meet breakaway criteria.

8. (3.3.1.8) **Consider future drainage.** Future drainage requirements shall be considered when determining location of utility installations. Existing swales or ditches may need to be deepened. New drainage ditches may need to be constructed. New storm water drainage pipelines may need to be installed in the future.

3.3.2 HIGHWAYS WITH FULLY CONTROLLED ACCESS

Freeways and some expressways have full control of access. Full control of access to highways means that preference is given to through traffic by providing access connections only with selected public roads and by prohibiting at-grade crossings and direct private driveway connections. Delaware highways with full access control include:

- all interstate highways,
- freeways
- toll roads, and
- other roadways as determined by the Department.

3.3.2.1 CROSSING OF FREEWAY RIGHT-OF-WAY

New utility installations, and adjustments or relocations of existing utilities, are permitted to cross a freeway only in exceptional cases. The installation's effect on safety must be considered. All installations shall cross the freeway on a line perpendicular to its longitudinal alignment. Underground

crossings are preferred. Overhead crossings are not desirable and shall be avoided. If a utility believes there is no feasible alternative to an overhead crossing, it must submit a written request to the district. The utility request must include the proposed cost of the overhead installation, describe other alternatives, and detail the associated costs of those alternatives. District Public Works will use the information in making a final decision.

The following applies to developed areas or areas that are planned for development:

- **Spacing** - The utility distribution or feeder line crossings of freeways will be spaced as needed to serve consumers in a general area.
- **Approval** - Crossings of the freeway by utility service connections may be permitted with approval of District Public Works. Consideration will be given only when utility services are not available within reasonable distances along the side of the freeway.
- **Maintenance** - Access points to service utilities must be located outside the denial-of-access lines of throughways or ramps. The placement of underground utilities across freeways must preclude the need to disturb the roadway for maintenance or expansion operations.

3.3.2.2 (3.3.1.2) UTILITIES ALONG FREEWAYS - LATERAL POSITIONING

(3.3.1.2.1) Longitudinal installations of utilities will not be permitted within the denial-of-access lines of a freeway and other roads as determined by District Public Works. Frontage roads, where provided, may be used for placement of utilities with the approval of District Public Works. Utilities located outside the access lines cannot be serviced by entrance from through-traffic roadways or ramps.

(3.3.2.2.2) Utilities located on existing highway rights-of-way where the highway facility is being upgraded to a freeway must normally be moved. Permission for such utilities to remain in place may be granted if all service can be made from outside the access control line.

3.3.2.3 UTILITIES ALONG ROADS OR STREETS CROSSING FREEWAYS

Where a utility follows a road or street that crosses a freeway, the utility shall cross the freeway on the location of the crossroad or street, and generally within its right-of-way. The utility must be serviced without access from the freeway. All work is subject to State and FHWA regulations in effect at the time. Overhead crossings are not desirable and shall be avoided as noted in Section 3.3.2.1.

3.3.3 PARTIAL-ACCESS-CONTROL HIGHWAYS

On partial-access-control highways, preference is given to through traffic to a degree that, in addition to access connections with selected public roads, there may also be some other roads crossing at grade as well as some private driveway connections. Except for the types of highways listed under full access control in Section 3.3.2 (3.3.1), most highways in Delaware have partial access control.

3.3.3.1 UTILITIES ALONG PARTIAL-ACCESS-CONTROL HIGHWAYS - LATERAL POSITIONING

(3.3.3.1.1) In considering an aboveground facility along a partial-access-control highway, the following constraints apply with respect to the *location* of the facilities. Any exceptions to these requirements can be submitted by the utility and will be considered by the Department.

- **Clear zone** - Overhead utilities and appurtenances, placed longitudinally on the State's right-of-way, will be positioned outside of clear zones and as close to the right-of-way line as possible.
- **Curves** - It is not desirable that aboveground installations be placed on the outside of curves on roadways where the speed limit is above 30 miles per hour. Permission may be granted on a hardship basis. Rebuilding or upgrading existing facilities currently on the outside of a curve must conform to this section unless outside of the adjusted clear zone.
- **Daylight corners and traffic islands** - Aboveground features-such as poles, guys, enclosures, etc.-shall not be placed in corner cuts ("daylight corners") or on traffic islands.
- **Incorporated areas** - In incorporated areas, aboveground utilities will be placed as close as possible to the right-of-way line. If utilities cannot be placed as close as possible to the right-of-way line, the designs shall be reviewed and approved by District Public Works on a case-by-case basis, to minimize the impact on the traveled way. In curbed sections, the utilities will be located as far as possible behind the curbs-and in compliance with the ADA. They shall never be closer than the horizontal clearance established in DeIDOT's *Road Design Manual* and *A Policy on Geometric Design of Highways and Streets* (AASHTO's *Green Book*) and the *AASHTO Road Design Guide*.
- **Occupy only one side of a roadway** - Every effort shall be made to place a utility line on one side of the roadway. New aerial service connections shall be avoided if possible. A Utility Construction Permit shall not be issued to place one utility's facilities along both sides of a traveled way unless justified and approved by the Chief Engineer.
- **Pole foundations** - When pole foundations will be utilized, the Department must approve the types and locations prior to the permit request.
- **Rural areas** - In rural, unincorporated areas, aboveground utilities will be installed 30 feet or more from the traveled way if State right-of-way is available. District Public Works must expressly approve closer placement when sufficient right-of-way is not available. Aboveground utilities will not be placed within the clear zone.
- **Slopes and ditches** - Poles, guys, stub poles, or other equipment will not be placed on front slopes, back slopes or at ditch bottoms.

(3.3.3.1.2) In considering an aboveground facility along a partial-access-control highway, the requirements below apply with respect to the *design* of the facilities. Any exceptions to these requirements can be submitted by the utility and will be considered by the Department.

- **Joint-use** - Joint-use single-pole construction must be used at locations where more than one utility or type of facility is involved. This is most important at locations where the right-of-way widths approach the minimum required for safe operations or maintenance, or where separate installations may require extensive removal or alteration of trees. Exceptions will be made only in cases of hardship as determined by District Public Works on a case-by-case basis. The pole owner should ensure that the pole is sized adequately to allow space for the joint use facilities.

[Note: The holder of a franchise must not grant permission to another utility facility to jointly occupy its pole line without notifying the other facility of the Department's requirements.]

- **Single-pole construction** - Any longitudinal installations of overhead lines on the highway right-of-way must be limited to single-pole construction.
- **Special Protection** - Only approved protective measures will be permitted where special protection is required under AASHTO guidelines for aboveground installations.

The owner of any abandoned pole within state right-of-way is responsible for ensuring its removal in a timely manner.

3.3.3.2 (3.3.2.2) UTILITIES ALONG HIGHWAYS - VERTICAL POSITIONING

(3.3.3.2.1) Overhead electric power and communications structures, lines and cables shall be installed in compliance with the latest edition of the National Electrical Safety Code. Existing lines and cables shall be maintained at minimum clearance of 23.5 feet above track rails of railroads and a minimum clearance of 18 feet above roads, streets, entrances and other areas subject to truck traffic. The above two clearances shall be maintained under all conditions, i.e. maximum conductor sag conditions (subject to terms of railroad permit requirements) and a minimum of 18 feet above all roadways-or in accordance with the codes described in Section 3.4, whichever is greater.

(3.3.3.2.2) The owner of utility facilities is responsible for moving them to eliminate any visual obstruction or interference to any traffic control device. This includes moving structures, overhead lines and cables, splice boxes, enclosures, and other appurtenances in order to provide adequate visibility of a traffic control device.

3.3.3.3 HISTORIC SITES, SCENIC AREAS, PARKS, ETC.

Aboveground utility installations-including those needed for highway purposes such as highway lighting or to serve a weigh station, rest area, or recreation area-are not permitted on highway rights-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. However, the Department may permit exceptions provided that the conditions described in the current *Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects* are met. Relocation of pre-existing utility facilities from overhead to underground is subject to reimbursement within the guidelines described in Section 5.0.

3.3.4 SUBDIVISIONS

3.3.4.1 SUBDIVISION STREETS NOT YET ACCEPTED FOR STATE MAINTENANCE

The Subdivision Developer shall be responsible for submitting utility installation site plans to District Public Works for review and approval prior to commencement of street construction within the subdivision and prior to utility installation.

It is not necessary for a utility to obtain a construction permit in new subdivisions. Upon completion and acceptance of the subdivision streets, the utilities that are located within the State right-of-way shall be franchised in accordance with the existing Annual Master Franchise for each utility.

The utilities in a subdivision will be located as follows:

1. (3.3.4.1.1) Utilities will be allowed within the right-of-way.

2. (3.3.4.1.2) Aboveground utilities must be avoided if possible. If pole lines are to be used, they must be placed behind the clear zone.
3. (3.3.4.1.3) Where feasible, underground utilities shall be placed behind the proposed curb line or in an established utility easement.
4. (3.3.4.1.4) The main lines of underground utilities must be longitudinally located between the right-of-way line and the curb or edge of pavement-except for sanitary sewers that will be placed to avoid the wheel path when they cannot be located outside the roadway. If possible, sanitary sewers should avoid the crown of the roadway. Service lines may cross under the paved area to connect residences with main lines.

3.3.4.2 SUBDIVISION STREETS ACCEPTED FOR STATE MAINTENANCE

Utility construction permits are required for existing subdivisions. Existing underground utilities will be permitted to remain in place in subdivisions with streets currently maintained by the Department. However, any utilities that are upgraded shall be located according to Section 3.3.4.1, provided there is enough right-of-way to place them behind curbs.

3.4 DESIGN

3.4.1 GENERAL

A Master Franchise must be in force for any utility facilities present in the highway right-of-way. The utility's proposed design in all cases must:

- protect the integrity of the roadway or highway structure,
- protect the appearance of the highway,
- minimize interference with traffic during maintenance of the facility, and
- minimize highway maintenance problems for the State.

3.4.2 PERMIT AND NEW SERVICE INSTALLATION

(3.4.2.1) District Public Works will review a permit application for new or existing utilities, maintenance work and re-construction, and some utility work in advance of highway construction. If acceptable, the District Public Works Section will approve the:

- (3.4.2.1.1) proposed location for the utility facility, and
- (3.4.2.1.2) methods of installing and/or attaching the facility and repairing the highway or structure.

(3.4.2.2) The District will review and approve the traffic control plan to ensure highway safety, including the safe and free flow of traffic.

3.4.3 PROJECT DESIGN AND FACILITY RELOCATION

On DelDOT highway construction projects the Utilities Engineer will coordinate, review, and approve the utility's proposed plans for the:

- **location** of the facility, either in its existing position or in a relocated position,
- **methods** of installing and/or attaching the facility,
- **timing** of any proposed adjustments and/or relocations, and
- **reimbursement** of work in accordance with the requirements in this manual.

3.4.4 REQUIREMENTS

(3.4.4.1) Utility installations on, over, or under the rights-of-way of State highways, and utility attachments to highway structures, are to meet or exceed the requirements listed below as well as any other applicable codes or regulations.

- **Electric power and communications:** *National Electric Safety Code (NESC).*
- **Water transmission and distribution:** *American Water Works Association (AWWA).*
- **Pressure pipelines:** *Standard Code of Pressure Piping of the American Society of Mechanical Engineers ASME B31.4 and B31.8* and applicable sections of Federal, State, local and industry codes.
- **Liquid petroleum pipelines:** *American Petroleum Institute Recommended Practice for Steel Pipelines Crossing Railroads and Highways. U.S. DOT Rules and Regulations* governing transportation of such materials, including *Code of Federal Regulations Title 49 Part 195.*
- **Pipelines carrying natural gas and hazardous materials:** *U.S. DOT Rules and Regulations* governing transportation of such materials, including *Code of Federal Regulations Title 49 Parts 192 and 195.*
- **Fiber optic facilities:** *Standard for the Physical Location and Protection of Below-Ground Physical Plant (EIA/TIA-590);* also NESC provisions for communications cable.

(3.4.4.2) Provisions for future expansion of utility facilities are to be made when planning for adjustments to existing facilities or preparing for new installations.

(3.4.4.3) Underground utilities must consider safe trenching practices when preparing their designs and constructing their facilities. Both the utilities and their contractors must comply with all Occupational Safety and Health Administration (OSHA) requirements while working on highway rights-of-way. If unsafe work environments exist, work must stop until safe conditions are established or restored.

3.4.5 OTHER PERMITS

Utilities are responsible for obtaining all required permits from municipal, State, and federal governmental agencies and railroads. Examples of these permits include, but are not limited to:

- Water quality permits, DNREC Water Quality Certification,
- DNREC subaqueous Lands/Wetlands permits,
- DNREC Coastal Zone Consistency Certification,
- County Floodplain permit (New Castle County only),
- U.S. Coast Guard permit,
- US Army Corps 404 permits,
- Sedimentation and erosion permits,
- Railroad crossing permits (See Section 4.1).

3.5 UTILITY CLEARANCES AND DEPTH OF COVER

3.5.1 POSITIONING AND CLEARANCES

Vertical and horizontal clearances between utilities and utility clearances above roadways must conform to the utility codes cited in Section 3.4 and any other applicable industry codes and standards.

3.5.2 DEPTH OF COVER

Depth of cover must also conform to the utility codes cited in Section 3.4 and any other applicable codes and regulations. The Department may request greater cover in some instances due to the type of road being constructed.

3.5.3 FOR HIGHWAY APPURTENANCES

(3.5.3.1) Utilities must provide the minimum overhead clearances above the roadway defined in the references listed in Section 3.4. Appropriate clearances from signal poles and street lighting shall also be maintained, as applicable codes require.

(3.5.3.2) Utility accesses and valve covers shall not be located in the roadway of rural highways. If there is no feasible alternative in urban and suburban areas, they shall not be located in a wheel path or in the centerline of the roadway.

(3.5.3.3) Horizontal clearances will be in accordance with the clear zone requirements described in the *DelDOT Road Design Manual* and *A Policy on Geometric Design of Highways and Streets* (AASHTO's *Green Book*). Exceptions must have the approval of the District Public Works Section.

3.6 UNDERGROUND INSTALLATIONS

3.6.1 UNDERGROUND UTILITIES CROSSING HIGHWAYS.

Avoid utility crossings in deep cuts, near bridge and retaining wall footings, in wet or rocky terrain and at highway cross drains where flow of water, drift, or streambed load may be obstructed. The crossings shall also be avoided where it is difficult to attain minimum cover, and through paved or unpaved berm slopes under structures. See Section 3.3 for more information regarding crossings of freeways and partial-access-control highways. Refer to section 3.6.3 for more information regarding pipelines.

3.6.2 INSTALLATION METHODS

3.6.2.1 DIRECTIONAL BORING, JACKING AND PUSH-AUGERING

(3.6.2.1.1) Directional boring is the industry standard and the method accepted by the Department. Boring is defined as the operation by which large carriers or casings are jacked through oversize bores. The bores are carved progressively ahead of the leading edge of the advancing pipe as soil is mucked back through the pipe. Jacking is defined as the pushing of a sleeve or casing pipe under a highway to make an underground utility crossing without disturbing the roadbed by open trenching.

(3.6.2.1.2) Utilities must provide plans for proposed jacking, push-augering, or directional bore operations for approval by the District Public Works Section when applying for a construction permit. Directional bores are the preferred method and shall be considered wherever possible. Pits for jacking, push-augering or directional bore are not permitted in a proposed paving area.

(3.6.2.1.3) The pits for jacking, push-augering, or directional bore must be excavated no closer to the roadway than 5 feet from the edge of an improved shoulder. Where the shoulder is dirt or grass, the pit excavation may encroach on the shoulder but must remain at least 10 feet from the edge of pavement. Adequate measures must be taken to ensure traffic safety and the integrity of the roadway, especially where the pit is so close to the traveled way. Two approved pit layouts are shown in Figure 2-1. For curb-and-gutter sections, pits must be a minimum of 5 feet from the back of the curb. If sufficient right-of-way is unavailable in the above situations, lesser distances, 2 feet or greater, may be approved.

3.6.2.2 OPEN CUTTING

(3.6.2.2.1) The open cutting of a roadway for the purpose of working on or installing new underground facilities shall be avoided. DeIDOT's policy is to avoid the open cutting of any roadway for at least five years after resurfacing or reconstruction, unless there is no alternative. Exceptions will be made only in cases of hardship as determined by the Department on a case-by-case basis.

(3.6.2.2.2) The District Public Works Section shall review requests for open cutting on a case-by-case basis, and shall have final approval of how the work is to be accomplished. For work related to a DeIDOT highway project, permission for open cutting shall be requested as part of the Utility Statement during the planning of the project.

(3.6.2.2.3) In the event open cutting is allowed, the utility must adhere strictly to the backfill and restoration requirements. The District Public Works Section will specify fill material. Borrow type C can be utilized however; Flowable Fill is recommended for cross-road cuts. Flowable Fill may be required by the District Public Works Section. Information regarding Flowable Fill from the Special Provisions can be found in Appendix F of this manual.

(3.6.2.2.4) Utilities may not cover open trenches with steel plates between October 31 and April 15. The District Public Works Section may grant exceptions.

3.6.2.3 OTHER INSTALLATION METHODS

(3.6.2.3.1) Methods of installing utilities beneath roadways, other than push-augering, jacking, and directional bore will be considered for approval only on a case-by-case basis for specific sites. The utility must prepare and submit complete plans and specifications for the excavation, design, and installation involved in other methods.

(3.6.2.3.2) Other methods include tunneling and installing tunnel liners or open-cut construction involving the installation of:

- reinforced concrete box culverts;
- corrugated metal, structural plate, or reinforced concrete arch culverts; or
- corrugated metal, structural plate, or reinforced concrete pipe culverts.

3.6.3 PIPELINES

All pipeline installations must conform to the applicable regulations pertaining to the type of installation being constructed. The Department considers vents, drains, markers, manholes, and shutoffs as parts of pipeline installations.

3.6.3.1 PERMITS

Utilities are required to give advance notice and obtain approval from the District Office for any new pipeline or anticipated change to the current design or operation of a pipeline. The permit application shall specify the applicable codes to be used. Construction permits for pipelines shall specify the class of materials being carried, transmittant, the maximum working, test, or design pressures, and the design standards for the carrier.

3.6.3.2 PLACEMENT OF PIPELINE

- **Pipelines installed longitudinally** - The pipeline must be placed as close as possible to the outer extremities of the highway, unless approved otherwise in municipality or suburban development. The placement shall not interfere with highway drainage or with the structural integrity of the travelway shoulders or embankment.
- **Pipeline Crossings (3.6.3.2.1)**
 1. (3.6.3.2.1.1) Pipeline crossings shall not be located in deep cuts, across cuts and fills, on steep slopes, near footings of bridges or retaining wall footings, across intersections at grade or ramp terminals, in wet or rocky terrain, across drains where flows of water, drifts, or stream beds may be obstructed, or within basins of an underpass drained by a pump.
 2. (3.6.3.2.1.2) Pipe, conduit, sewer, or other similar facility must not be placed inside any drainage pipe. Neither shall objects be placed across the ends of any drainage pipe or culvert so as to obstruct the full flow of water.

3. (3.6.3.2.1.3) Pipelines crossing streams must be securely suspended above flood lines or lay beneath streambeds.

▪ **Pipeline Appurtenances (3.6.3.2.2)**

1. (3.6.3.2.2.1) **Manholes** - Manholes are not to be located in the traveled way of any expressway or public way for vehicular travel. The District Public Works Section may authorize exceptions only at locations where manholes are essential parts of existing lines that have been previously authorized to remain in place. Such installations shall avoid intersections. Manholes shall be designed and located so that they will not interfere with other utilities and planned highway expansion. Manholes are not to be located in the flow line of ditches, the centerline of the roadway, or the wheel path of traffic. All manholes must be flush with the finished grade. Refer to Section 3.3.4.1 for information regarding Subdivisions.
2. (3.6.3.2.2.2) **Valves** - Shut-off valves, preferably automatic, must be installed in lines at or near the ends of structures. Isolation valves will also be required near crossings of unusual hazards. Exceptions may be allowed when other safety devices placed within a reasonable distance of the structure or hazard can isolate the pipeline.
3. (3.6.3.2.2.3) **Vents** - Any vents shall be located at both ends of casings longer than 150 ft and at the high end of short casings. Vent standpipes shall not interfere with maintenance, use of the highway, nor affect pedestrian traffic. The standpipes shall be highly visible and preferably located on a right-of-way line.

3.6.3.3 HAZARDOUS TRANSMITTANTS

Crossings by pipelines carrying a hazardous liquid or liquefied gas (including propane) or other hazardous or volatile material shall not be allowed. Exceptions will be made only in cases of hardship as determined by the Department on a case-by-case basis with reference to federal guidelines. Natural gas pipelines, however, will be allowed via the permit review and approval process through the District Office.

3.6.3.4 PIPELINE INSTALLATION

- Pipeline crossings are to be identified by permanent markers.
- Any new water line or sanitary sewer line shall be pressure-tested to assure that it is watertight.
- Pipelines abandoned in place shall be properly purged and sealed.
- **Depth of Pipeline** - The utilities must also conform to the any utility codes cited in Section 3.4.4.
 1. **Crossing** - The critical control for the depth of cover on a non-cased pipeline crossing is the low point in the highway cross-section. Normally, this is the bottom of the longitudinal ditch. Additional protection shall be provided for any pipeline with less than minimal cover. Such measures would employ higher factor of safety in the design, construction, and testing of the uncased carrier pipe, including such features as thicker wall pipe, radiograph testing of welds, hydrostatic testing, coating and

wrapping, and cathodic protection as well as well as suitable bridging or concrete slabs.

2. **Longitudinal** - Pipelines in the highway right-of-way must be placed at least 24 inches below the finished surface. Lines crossing ditches must be placed at least 24 inches below the ditch flow line. The nearest edge of the trench is to be at least 5 feet from the edge of the traveled way or curb line, however, this distance can be reduced to 2 feet or greater should sufficient right-of-way be unavailable. Shoring must be placed where narrow right-of-way limits this minimum offset. The shoring will protect the curb line or traveled way during utility installation.
- **Clearances between Utilities** - All utilities shall be separated from one another as required by appropriate codes and ordinances.
 1. Section 1102, Title 26, Delaware Code stipulates that a distance of at least 3 feet shall be maintained between pipes carrying steam, heat, or power and pipes carrying gas or water, unless one is crossing the other. Where pipes are crossing one another, the minimum clearance must be at least 1 foot.
 2. Where a sanitary sewer line is to cross under a water line, the sanitary sewer line shall be laid with a minimum of 18 inches clearance between its top and the bottom of the water line. Where the minimum vertical clearance cannot be obtained, the District Public Works Section may approve the construction of the water line with slip-on or mechanical-joint ductile iron, cast iron, pressure, or pre-stressed concrete cylinder pipe for a distance of 10 feet on each side of the sanitary sewer. One full length of water-line pipe is to be centered over the sanitary sewer line so that both joints are as far from the sanitary sewer line as possible.
 3. The horizontal separation between sanitary sewer lines and water mains must be at least 10 feet, or in compliance with American Water Works Association (AWWA) regulations. Where it is impossible to separate underground utilities horizontally the desired minimum, the water line and sanitary sewer line must be constructed of slip-on or mechanical-joint ductile iron, cast iron, pressure, or pre-stressed concrete cylinder pipe with the approval of the appropriate regulatory authority.

3.6.4 CASINGS

3.6.4.1 GENERAL

A casing is a larger pipe, conduit, or duct enclosing a carrier. Underground utility crossings of roadways shall be made in sleeves or casings for the following conditions:

1. (3.6.4.1.1) Utility crossings of freeways, expressways, and other controlled access highways and at other locations where it is necessary to avoid trenched construction and prevent inconvenience to highway users;
2. (3.6.4.1.2) To protect carrier pipe from external loads or shock, either during or after construction of the highway; and
3. (3.6.4.1.3) To prevent leaked material from saturating or damaging the highway embankment by conveying leaking fluids or gases away from the area directly beneath the roadway to a

point of venting at or near the right-of-way line or to a point of drainage in the highway ditch or a natural drainage way.

3.6.4.2 WHEN TO UTILIZE CASINGS

Except for circumstances as described in Section 3.6.4.3, the Department requires that:

1. (3.6.4.2.1) All crossings of full-access-control roadways (interstate highways, toll roads, freeways) shall be enclosed or cased.
2. (3.6.4.2.2) All crossings of existing or proposed arterial and collector roadways (partial-access-control roadways) shall be enclosed or cased. Arterial and collector roadways are identified on the DelDOT Functional Classification Maps.
3. (3.6.4.2.3) Casings are required for crossings of existing or proposed major entrances to commercial facilities or residential subdivisions. However, if an exception is granted, at such locations the minimum design shall be the same as the design requirements outlined in Section 3.6.4.3, or as approved by the District Public Works Section.
4. (3.6.4.2.4) Typically, jacked or bored installations of coated carrier pipes shall be cased unless assurance can be provided against damage to the protective coating.
5. (3.6.4.2.5) Consideration shall be given to encasement or other suitable protection for any pipeline
 - a) (3.6.4.2.5.1) with less than minimum cover,
 - b) (3.6.4.2.5.2) near footings of bridges or other highway structures,
 - c) (3.6.4.2.5.3) across unstable or subsiding ground, or
 - d) (3.6.4.2.5.4) near other locations where hazardous conditions may exist.

3.6.4.3 EXCEPTIONS TO CASINGS

(3.6.4.3.1) Suitable bridging, concrete slabs, or other appropriate measures should be used to protect existing uncased pipelines which by reason of shallow cover or location make them vulnerable to damage from highway construction or maintenance operations. Such existing lines may remain in place without further protection measures if they are of adequate depth and do not conflict with the highway construction or maintenance operations, provided both highway and utility officials are satisfied that the lines are, and will remain, structurally sound and operationally safe.

(3.6.4.3.2) High Density Polyethylene (HDPE) is under evaluation as an uncased carrier for natural gas.

(3.6.4.3.3) New uncased construction can be employed if approved by District Public Works for permit work or the Utilities Engineer for highway construction projects. The approval is acceptable when open cutting is approved, if necessary, and in the following circumstances:

- 1) (3.6.4.3.3.1) The carrier is approved by the Department and conforms to the material and design requirements of the utility industry, governmental codes and standards, can support the load of the highway plus loads superimposed thereon when the pipe is operated under all

ranges of pressure from maximum internal to zero pressure, with a higher factor of safety than normally required for cased construction. Carriers meeting these requirements can be used for the following installations provided a profile is submitted along with the plans for the following types of installations:

- a) (3.6.4.3.3.1.1) **Natural Gas** - utilities can employ welded steel pipe as an uncased carrier pipe with at least 42 inches of cover. All such pipes shall meet design requirements as outlined above. High Density Polyethylene (HDPE) is under evaluation as an uncased carrier.
- b) (3.6.4.3.3.1.2) **Water** - The minimum requirements for waterline crossings shall be ductile iron pipe with an industry standard push joint and at least 42 inches of cover. All such ductile iron pipes shall meet design requirements as outlined above.
- 2) (3.6.4.3.3.1.3) **Other Transmittants**: A Department approved uncased crossing of welded steel pipelines carrying a transmittant which is flammable, corrosive, expansive, or unstable materials, particularly if carried at high pressure, may be permitted, provided additional protective measures are taken in lieu of casing. Such measures would employ higher factor of safety in the design, construction, and testing of the uncased carrier pipe, including such features as thicker wall pipe, radiograph testing of welds, hydrostatic testing, coating and wrapping, and cathodic protection

(3.6.4.3.4) Suitable bridging, concrete slabs, or other appropriate measures shall be used to protect existing uncased pipelines which by reason of shallow cover or location make them vulnerable to damage from highway construction or maintenance operations.

(3.6.4.3.5) Any exceptions (aside from those mentioned in Section 3.6.4.3.3.1) to the casing requirements shall be determined by the District Public Works Section, based upon a written request for the exception stating the hardship and proposed method of crossing. In requesting exceptions, the utility shall consider the Department's policy of no open cutting of a roadway within 5 years after it has been resurfaced, except for an emergency. In addition, there shall be no open cutting for service lateral crossings. Utilities shall also consider those areas where repairs would be restricted by lack of rights-of-way or easements.

3.6.4.4 PERMITS FOR CASINGS

In all situations where a casing is to be installed, the utility shall submit a plan describing the location, method, and type of casing for approval by the District Public Works Section.

3.6.4.5 PLACEMENT OF CASING

(3.6.4.5.1) Where casings are required, the location of the crossings must be determined carefully so that, if necessary, the utility can acquire sufficient right-of-way or private easements to remove or replace the utilities.

(3.6.4.5.2) Casings shall extend at least 5 feet beyond the curb, pavement, projected fill slopes, or ditch lines to assure proper support of roadways during any repairs to pipelines. For all access-controlled highways, the encasement shall extend from right-of-way line to right-of way line or outside outer curbs. The design shall encompass allowance for future widening of the highway without the need of utility adjustment.

3.6.4.6 TYPES OF CASING

Casings shall be designed to support the load of the highway and superimposed loads thereon and at least equal the structural requirements for highway drainage facilities. Corrugated materials shall not be allowed.

- (3.6.4.6.1) **Volatile Transmittant** - The casings for facilities transmitting volatile materials must be of steel pipe of standard manufacture. The joints must be welded or fused sealed around the entire circumference of the pipe as industry standards and regulations allow.
- (3.6.4.6.2) **Non-Volatile Transmittant** - The casings for facilities transmitting non-volatile materials may be of standard material such as steel pipe. Other usable materials must be of a design to sustain the live and dead loads currently used in Delaware highway design. Such materials include reinforced concrete pipe, cast iron pipe, aluminum pipe, and ductile iron pipe.

3.6.4.7 CASING INSTALLATION

(3.6.4.7.1) All pipeline installations must conform to the applicable regulations pertaining to the type of installation being constructed. When a pipeline casing is placed under a roadway, all installations are to be made by jacking, push-augering, or other approved methods. If coated pipe is used for jacking or boring, the same pipe should not be used as a carrier pipe.

(3.6.4.7.2) A typical layout for jacking through a roadway is shown in Figure 2-1. Appropriate traffic control measures shall be used in accordance with DelDOT's *Traffic Control Manual* due to the reduction in shoulder use by the traveling public caused by jacking operations.

(3.6.4.7.3) Other requirements for installation are as follows:

- (3.6.4.7.3.1) **Non-Metallic Pipe** - Installations of non-metallic pipe must include a tracer material that is detectable by locating devices that are acceptable within the industry.
- (3.6.4.7.3.2) **Depth of Casing** - The minimum cover required over casings is 42 inches, as measured from the top of the casing. The critical control for the depth of cover on a non-cased pipeline crossing is the low point in the highway cross-section. Normally, this is the bottom of the longitudinal ditch. Additional protection shall be provided for any pipeline with less than minimal cover.
- (3.6.4.7.3.3) **Clearances** - All utilities shall be separated from one another as required by appropriate codes and ordinances.
- (3.6.4.7.3.4) **Sealing of Casing** - Casing pipe over 4 inches in diameter must be sealed. Where carrier pipes that carry combustibles are cased, the casing pipes must be provided with a screened vent on each end that is as near as feasible to the right-of-way boundaries.
- (3.6.4.7.3.5) **Drains** - Drains shall be provided for casings and tunnels enclosing carriers of liquid, liquefied gas, or heavy gas. Drains may not outfall into roadside ditches. Such outfall shall not be used as a wasteway for purging the carrier unless specifically authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

- (3.6.4.7.3.6) **Vents** - Where carrier pipes that carry combustibles are cased, the casing pipes must be provided with a screened vent on each end that is as near as feasible to the right-of-way boundaries. Other requirements are as follows:
 - (3.6.4.7.3.7) Vents required for cased pipes are to be located at the high end of short casings-less than 150 feet long-and at both ends of casings longer than 150 feet.
 - (3.6.4.7.3.8) Vent standpipes and warning markers are to be located and constructed so as not to interfere with the maintenance of the highway nor be concealed by vegetation.

3.6.5 ELECTRIC, COMMUNICATION, AND CATV

(3.6.5.1) The requirements discussed earlier in this chapter describing installations and maintenance of pipelines crossing highway rights-of-way as related to casings, markers, and installations must also be applied to underground electric, CATV, and communications lines two inches or larger. The minimum depth of cover for these cased crossings is 42". Greater cover may be required depending on the construction of the roadway.

(3.6.5.2) For underground electric, CATV, and communications lines less than two inches in diameter:

- (3.6.5.2.1) Where a conduit or casing is placed under an existing roadway, all installations must be made by jacking, push-augering, directional bore or other approved methods. The casing must have a minimum nominal diameter of 2 inches and is to be placed a minimum of 24 inches below the surface. The utilities must also conform to the National Electric Safety Code and any other utility codes cited in Section 3.4 (2.4). Utilities may be required to install facilities deeper on a case by case basis depending upon the construction of the roadway.
- (3.6.5.2.2) Where the burying of cable is permitted along the edge of pavement, it may be done by plowing or trenching methods. The nearest edge of the trench must be at least 5 feet from the edge of the pavement, however, this distance can be reduced to 2 feet or greater should sufficient right-of-way be unavailable. The minimum depth of bury for CATV, communications, and electric is 24 inches, however, these utilities must also conform to the National Electric Safety Code and any other applicable regulations.

3.7 ATTACHMENTS TO STRUCTURES

3.7.1 GENERAL

(3.7.1.1) Attaching utility lines to a highway structure can materially affect the structure, the safe operation of traffic, and the efficiency of maintenance, safety inspections, and structural repairs.

(3.7.1.2) New attachments of utility facilities such as water, gas, sanitary sewer mains and electrical facilities will not be allowed on new structures. Communications and other telecommunications will not be permitted unless an extreme hardship can be proven. If a utility believes there is no feasible alternative, it must submit a written request to the district. In the request, the utility must include the proposed cost of the installation, describe other alternatives, and detail the associated costs of those alternatives. The District Public Works Section, Bridge Design Engineer, and Utilities Engineer will use the information in making a decision. The request is also subject to the approval of the Assistant Director, Design and Chief Engineer. Where utility attachments are requested, they will be considered only if the

structure in question is of a design that is adequate to support the additional load and to accommodate the utility facility without compromise of highway features, including reasonable ease of bridge maintenance. In all cases, gas lines or pipelines carrying explosive, corrosive, or flammable fluids must follow all applicable Federal and State codes.

(3.7.1.3) The Department may enter into an agreement to reimburse the utility to design and inspect facility support and protection during Department projects as described in Chapter 4. Refer to the *OSHA Technical Manual* for requirements.

3.7.2 REQUEST FOR ATTACHMENT

(3.7.2.1) In extreme hardship cases, the utility shall submit to the Utilities Section Engineer a written request to attach its facility to a structure owned and maintained by DelDOT. The request shall include the following items:

1. (3.7.2.1.1) Identification of the structure including details regarding the utility facility and its contents, such as pressure, voltage, current, flammability, freeze point, weight per foot, and any other pertinent information.
2. (3.7.2.1.2) Calculations performed by a Delaware registered professional engineer to demonstrate the structural impact on the existing structure. All hazardous impacts must be addressed-magnetic fields, protection against electrocution, etc.
3. (3.7.2.1.3) A study identifying alternate methods of getting the facility over, under, or around the obstacle, as well as the costs and problems associated with each alternative.
4. (3.7.2.1.4) Descriptions of the proposed method of attachment and the appropriate devices for protecting the bridge and the facility.
5. (3.7.2.1.5) The costs of the design and/or increased construction expenses, including the utility's commitment to pay for the construction expenses.

(3.7.2.2) The request for attachment shall then be reviewed by District Public Works, Utilities Engineer and the Bridge Design Engineer. The request is also subject to the approval of the Assistant Director, Design and Chief Engineer.

(3.7.2.3) Utilities are expected to make a good-faith effort to accommodate DelDOT maintenance or construction requirements. The Utility shall submit all material and construction specifications for inclusion in contract documents for any work to be performed by DelDOT's contractor.

3.7.3 NEW CONSTRUCTION

If the Department approves the attachment, the utility must agree to have the facility installed by the Department's contractor at the price assigned to this bid item within the Department's construction project bid, at the utility's expense. The utility shall reimburse the Department in accordance with the terms of an agreement outlining the conditions of bridge occupancy.

3.7.4 EXISTING STRUCTURES

The following policies apply to utilities on existing structures:

1. (3.7.4.1) Existing utilities attached to a structure can remain if they are not impacted by a Department project.
2. (3.7.4.2) Existing utilities must be relocated off the structure if the Department's project requires either temporary or permanent relocation.
3. (3.7.4.3) Any utility that plans to replace a facility attached to a structure shall relocate the facility off the structure.
4. (3.7.4.4) The utility must consult the Department District Public Works on its choice of contractor, and have the Department's District Public Work's consent. The utility, by agreement, shall pay for Department inspection, and the Department shall have an inspector on site during the construction.

3.7.5 ATTACHMENT PROCEDURES

The following should be considered when the design of utility attachments is reviewed:

1. (3.7.5.1) The attachment is designed to minimize adverse impact on structure maintenance.
2. (3.7.5.2) No facilities are attached to the outsides of structures.
3. (3.7.5.3) All utility facilities attached to structures shall be housed in casing pipes to allow for insertion and extraction of the carrier facility.
4. (3.7.5.4) No manholes are constructed in bridge decks.
5. (3.7.5.5) Utilities are placed so that the vertical clearance of the bridge above the stream, pavement, or railroad tracks is not reduced.
6. (3.7.5.6) Utilities are located beneath decks, between the outer girders or beams, and within a cell -above the low superstructure steel or masonry.
7. (3.7.5.7) Support rollers, saddles, or padded or coated hangers are used to muffle vibration noise.
8. (3.7.5.8) The casings of pipes or conduits that are carried through bridges, or attached to them, are effectively opened or vented at each end to prevent pressure buildups and detect gas or fluid leaks. Casing pipes shall be sealed at the ends with a flexible material to prevent flowing water or debris from entering the annular space between the casing and carrier. Casing drains shall be provided for a carrier of liquid, liquefied gas, or heavy gas.
9. (3.7.5.9) Additional protective measures are taken where pipes or conduits carried through or attached to structures are not cased. Such measures shall employ a higher safety factor in the design, construction, and testing of the pipeline than would normally be required for cased construction.

10. (3.7.5.10) Upon leaving bridges, the utilities are aligned outside the roadway in as short a distance as operationally practicable.
11. (3.7.5.11) Hangers or rollers are suspended from inserts below deck or from hanger rods clamped to beam flanges. No bolting through bridge floors or beams should be allowed.
12. (3.7.5.12) Where appropriate, the linear expansion and contraction of utilities due to temperature changes are provided for. Line bends or expansion couplings should be used.
13. (3.7.5.13) Suitable corrosion protection is provided.
14. (3.7.5.14) Communication and electric lines that are attached to structures, or pass through them, are suitably insulated and grounded, and are carried in protective conduit or pipe from the point of exit from the ground to re-entry. Carrier pipe and casing pipe shall be suitably insulated from electric power line attachments.
15. (3.7.5.15) Pipes and conduits that are carried through abutments are sleeved and tightly sealed with mastic, or carried through by other approved methods.

3.8 PRESERVATION AND RESTORATION

3.8.1 PRESERVATION

(3.8.1.1) Utilities are prohibited from spraying, cutting, and trimming trees on public highways or street rights-of-way unless written permission has been granted by the Department. When permission is granted for a utility to cut or trim trees, the work must be performed in compliance with Department standards.

(3.8.1.2) Where tree removal is permitted, stumps must be removed, and the resulting holes shall be properly backfilled to allow for settlement in accordance with the *DelDOT Standard Specifications*.

(3.8.1.3) The Department has adopted the *ANSI Standard A300 (Part 1) - 2001* entitled *Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance - Standard Practices*. The *Landscaping and Reforestation Act Implementation* (located in Section 2 of the *DelDOT Road Design Manual*) also provides guidelines for tree protection and maintenance during road construction projects.

(3.8.1.4) For all future transportation projects and maintenance activities on existing highway alignments, trees must be replaced in accordance with the Department's *Landscaping and Reforestation Act Implementation* located in Section 2 of the *DelDOT Road Design Manual*. Each employee or agent of the Department who participates in the planning, design, and construction of projects and normal maintenance of the roadways should be aware of the aesthetic and environmental effect that natural vegetation provides. Every effort must be made to preserve the beauty of Delaware's roads. However, each employee or agent must also be aware of the danger posed by hazards left along the roadside. The *AASHTO Roadside Design Guide* should be used as reference. The traveling public has the right to expect a reasonably safe road and roadside area when faced with potential dangers such as blowouts, evasions of other vehicles or animals, adverse weather conditions, and other uncontrollable situations.

(3.8.1.5) Utilities shall ensure that appropriate erosion control devices are in place before work starts and properly maintained during construction. The surface area disturbed by utility installations or relocations shall be kept to a minimum.

Care shall also be taken in utility installations to avoid disturbing existing highway or private drainage facilities or sprinkler systems. Any damage to the facilities by the utility company or its subcontractors shall be repaired at the utility company's expense.

3.8.2 RESTORATION

(3.8.2.1) Damage to highway traveled ways, shoulders, and drainage features caused by utility installations or repairs must be immediately restored to their original condition as stated in the Delaware Code. If utilities have not completed restoration within 30 days, noncompliance regulations will take effect. Temporary patches from winter months shall be permanently restored by May 15 before noncompliance action will be taken. Damage to roadside areas in the right-of-way shall be repaired as soon as possible, or as specified by the District Public Works Section. Restoration is also necessary when utilities are working on active construction sites. The District Public Works Section will determine any necessary repairs.

(3.8.2.2) The utilities shall restore the damaged areas to a condition at least equivalent to that which existed prior to the utility work. In all cases, the District Public Works Section will determine the extent of restoration required. All such work will be done at the utility's expense and in accordance with the appropriate *Standard Specifications*. The Seeding specification is located in Section 734 of the *Standard Specifications*.

(3.8.2.3) The utility shall maintain the non-pavement restoration for a period of 12 months after the satisfactory completion. Utilities are responsible for maintaining pavement patches that result from utility work for three (3) years.

3.8.2.4 TRAVELED WAY - GENERAL

To maintain traffic, not more than one lane of traffic shall be closed at a time whenever a traveled way is cut. All cross-road cuts for utilities will be made perpendicular to the longitudinal centerline of the traveled way, and perpendicular to the plane of the finished subgrade. All patches must have a minimum length of 6 feet (as measured along the roadway centerline) and the width of the lane or lanes disturbed. Any lane encroachment of one foot or more requires restoration of the full lane width. Before reopening the section, the area shall be made usable for traffic. DelDOT *Standard Construction Detail P-2* illustrates cross-road cuts.

3.8.2.5 FLOWABLE FILL

Flowable fill is recommended for restoration of cross-road cuts although Borrow Type C can be utilized. Flowable fill shall meet the requirements of *Special Provision 208500* as shown in Appendix F. The District Public Works Section may require flowable fill.

3.8.2.6 TEMPORARY PATCHES

(3.8.2.6.1) If immediate repairs to the traveled way are not feasible-and if the District Public Works Section concurs-a temporary patch may be used until permanent repairs are completed. Figure 2-3 shows the minimum design requirements for temporary patches: at least 8 inches of compacted graded aggregate overlaid by at least 2 inches of Superpave Type C 160 Gyration, PG 64-22. When weather conditions prohibit the use of such mix, District Public Works can approve 10 inches of compacted graded aggregate overlaid by at least 2 inches of cold patch mix.

(3.8.2.6.2) Figure 2-3 also illustrates trench width and backfill layer requirements. Backfill shall be placed and compacted in successive layers. Trench widths vary, but should not be less than 2 feet plus the outside diameter of the pipe. Each backfill layer is to be placed in a level, uniform cross section not exceeding 8 inches in loose depth, and then compacted with a mechanical tamper according to the *Standard Specifications* Division 200 regarding Earthwork.

3.8.2.7 SURFACE TREATMENTS AND HOT MIX PAVEMENTS

(3.8.2.7.1) Figure 2-4 illustrates the details of permanent cross-road or longitudinal utility patches for surface-treated or hot mix asphalt roads and shoulders. Note that this is a minimum patch. If the existing roadway has a heavier cross section than indicated in Figure 2-4, it will be replaced with the same cross section or as directed by the District Public Works Section.

(3.8.2.7.2) The compaction requirements for both the patch material and the backfill material are covered in Division 200 of DelDOT's *Standard Specifications*.

(3.8.2.7.3) The details for a temporary patch are shown in Figure 2-3.

3.8.2.8 PORTLAND CEMENT CONCRETE PAVEMENTS

(3.8.2.8.1) Portland cement concrete (PCC) streets and roads must be patched as described in *Section 503-"Patching Portland Cement Concrete Pavement"* of the *Standard Specifications*. The details are shown in the DelDOT's *Standard Construction Detail P-2 for PCC Pavement Patching*.

(3.8.2.8.2) An approved concrete saw shall be used to make a vertical, full-depth cut in the concrete pavement. The cut is to be made to ensure a straight, clean, vertical surface.

(3.8.2.8.3) Temporary patches are discouraged in PCC pavements in favor of plating the opening and returning the next day to pour permanent ones. If a temporary patch is to be used, it will require the same cross section as shown in Figure 2-3 (8 inches graded).

(3.8.2.8.4) Other details of utility patches in PCC pavements are shown in *Standard No. P2* of DelDOT's *Standard Construction Details*.

3.8.2.9 HOT MIX OVERLAYS ON PCC PAVEMENTS

Utility patches made in PCC pavements with hot mix overlays shall comply with the current *Standard Specifications* and gain approval of the District Public Works Section. The patch layout is illustrated in *Standard No. P2* of DelDOT's *Standard Construction Details*.

3.8.2.10 ROADSIDES

(3.8.2.10.1) Damage to roadside areas in the right-of-way shall be repaired as soon as possible to conditions at least equivalent to those existing prior to utility work. The restoration of roadside areas is concerned mainly with trenching and backfilling requirements. First, excavation widths will vary depending on the type of utility being placed.

(3.8.2.10.2) Trenches for cables, conduits, conductors, or pipes-other than those that are plowed or cut by a small trencher with a 4-inch to 6-inch cut-must be at least 8 inches wide.

(3.8.2.10.3) Trenches for pipe (other than rectangular or square conduit) with an outside diameter of 6 inches or more must be cut 2 feet wider than the outside diameter of the pipe. The pipe will then be placed in the trench with a 1-foot clearance on each side.

(3.8.2.10.4) Trenches are to be backfilled or covered immediately after installation of the utility facility. They cannot be left open overnight because they pose a hazard to the public. Authorization to use steel plates at any time other than April 15 through October 31 must be obtained from the District Public Works Section.

(3.8.2.10.5) Acceptable material must be used to backfill trenches. It shall be placed in 8-inch layers (loose measurement) and thoroughly compacted-just as for trenches in pavement areas. The backfill material and compaction method must meet the requirements of the *Standard Specifications*.

(3.8.2.10.6) Excavated material that is not satisfactory for backfill shall be removed from the area immediately after excavation. Material that is satisfactory for backfill must be stockpiled in a safe and orderly manner-preferably not stored on the roadway. District Public Works can approve storage on the roadway if necessary. Material stockpiled in the immediate work area must not pose a hazard to the traveling public. All materials shall be stockpiled in accordance with the rules established by the *Manual on Uniform Traffic Control Devices (MUTCD)*.

3.8.2.11 MANHOLES AND VALVE BOXES

(3.8.2.11.1) Where manholes or valve boxes are repaired in pavement areas, backfill shall be placed in 8-inch layers (loose measurement) and thoroughly compacted-the same as for trenches in pavement areas. The backfill material (Type C Borrow) and compaction method must meet the current *Standard Specifications*.

(3.8.2.11.2) During construction, areas around manhole lids and valve boxes must be dug by a non-destructive method. The details of proper roadway patching around manhole lids are shown in Figure 2-5.

3.8.2.12 TEST HOLES

(3.8.2.12.1) When possible, test holes are to be dug by a nondestructive method-such as by vacuum removal in a hole less than 244 square inches. The repair shall be only the size of the hole. The fill shall be compacted in lifts, and the same amount of stone, hot mix, concrete, etc.- as the existing roadway-shall be replaced.

(3.8.2.12.2) Sometimes small holes (up to 2 inches in diameter) bored in the surface for any type of utility testing or maintenance will be repaired with a flexible embedding sealer (cold poured resilient type epoxy joint sealer) approved by the District Public Works Section.

3.8.2.13 HIGHWAY CONSTRUCTION PROJECTS

(3.8.2.13.1) The restoration requirements defined in this chapter apply to the placement of utilities on existing roadways and rights-of-way. Where utility relocations and adjustments are made in conjunction with a highway improvement project, some portions of the restoration by the utilities may be unnecessary. For example, full restoration is unnecessary when the area will be repaved as a part of the highway improvement. Under these circumstances, appropriate portions of the restoration requirements may be waived.

(3.8.2.13.2) The utility is responsible for restoring all sedimentation and erosion control measures to their original conditions and for maintaining temporary patches.

Chapter 4

Master Franchise, Permits and Agreements

4.1 DEFINITIONS AND GENERAL REQUIREMENTS

4.1.1 DEFINITIONS

The Department uses three different types of documents to manage the installation and/or occupancy of utility facilities on, under or across State right-of-way. These documents include franchises, permits, and agreements.

1. **Public Utility Annual Master Franchise** - The Public Utility Annual Master Franchise is a legal instrument that grants the use of highway rights-of-way. It authorizes a public utility to place its facilities within State rights-of-way without any vested interest therein (under the provisions of Title 17 of the Delaware Code). A franchise does not serve as a control instrument over construction methods, traffic control features, or timing as opposed to a permit, which does. The only type of franchise accepted by the Department is the Public Utility Annual Master Franchise established October of 2004. The Master Franchise eliminated the need for a public utility to apply for a franchise each time a new utility installation was to be located within State right-of-way. The public utility applies for a Master Franchise for each County where it owns facilities within the State right-of-way. The executed Master Franchise remains in force for a period of 50 years and automatically renews annually for another 50 years unless otherwise agreed to by the parties.
2. **Use and Occupancy Agreement** - This agreement is between the Department and an individual or entity for a privately owned facility that crosses a State-maintained road. It provides the Department with information about the crossing and sets forth the conditions for it. This agreement may also be used for privately or individually owned facilities to be located on State rights-of-way.
3. **Utility Construction Permit** - A Utility Construction Permit authorizes a utility to construct, maintain, or repair a utility facility within State rights-of-way. The highway is under the control of District Public Works, and a Utility Construction Permit is used to secure the District Public Works Section's approval of the details controlling construction activities.
4. **Letter Agreement** - A letter agreement is a legal instrument between a utility and the Department to establish the utility work in conjunction with a DelDOT highway construction project that the Department has determined to be reimbursable. It describes the terms and

conditions-in accordance with the State code-by which the work and subsequent payment will be handled. An executed letter agreement is required prior to the performance of any work that is to be reimbursed. See Chapter 5 for further discussion.

4.1.2 GENERAL REQUIREMENTS

(4.1.2.1) A Master Franchise is required if a public utility locates facilities on State right-of-way. A public utility must submit a franchise application for each County where its facilities are located within the State rights-of-way.

(4.1.2.2) A Utility Construction Permit is required in all cases of maintenance or installation of utility facilities on State right-of-way, including right-of-way within a municipality unless otherwise specified for a State Highway Construction Project. A Master Franchise or a Use and Occupancy Agreement must be in force before a construction permit is valid. The application for a Utility Construction Permit must be submitted to the applicable District Office of Public Works.

(4.1.2.3) A Utility Construction Permit may not be issued to place aboveground or underground parallel facilities along both sides of a traveled way, unless justified and approved by the District Public Works Section or located within subdivisions. In the case of underground, safety and adequate space for other utilities should be considered before exceptions are approved.

(4.1.2.4) If the utility crosses over or under a railroad, the District will make a notation on the permit that the work is subject to approval by the railroad company. A copy of the railroad company approval shall be supplied upon request to the District prior to crossing the railroad.

4.2 MASTER FRANCHISE

4.2.1 PURPOSE

The Master Franchise is a legal instrument by which the use of highway right-of-way is granted. It is not a control instrument over construction methods, traffic control features, or timing as opposed to a permit. The Department may grant a Master Franchise to the following utilities:

1. (4.2.1.1) a public utility subject to the regulatory jurisdiction of the Public Service Commission;
2. (4.2.1.2) a cable system operator or video services provider franchised by the Public Service Commission or a municipality; or
3. (4.2.1.3) a utility owned, operated, controlled or created by the State, a municipality, county, or other political subdivision.

The Public Utility Annual Master Franchise form is located in Appendix B of this manual.

4.2.2 CONDITIONS

The Master Franchise requires that all facilities to be constructed must meet the requirements set forth in this manual for locations, construction, construction methods, timing, etc.

4.2.3 PREPARATION

The utility submits three Master Franchise forms for each County where they own facilities in the State rights-of-way. The three forms shall be signed with signature attested and the Company seal affixed. The franchise forms are to be submitted to the Utilities Engineer's office for processing.

4.2.4 PROCESSING

The appropriate Utility Coordinator reviews the Master Franchise forms for accuracy and completeness. If satisfactory, DeIDOT Deputy Attorney General, Assistant Director of Engineering Support, and the Director of Technology and Support Services will execute the agreement and affix the Departmental seal. An original will be returned to the utility, one is forwarded to the DeIDOT Director of Technology and Support Services, and one is retained in the Utilities Section. A copy of the Master Franchise will be forwarded to the appropriate District.

4.2.5 RENEWALS

Each Master Franchise remains in effect for 50 years from the date of execution by the Department. The Master Franchise shall automatically renew annually for another 50 years unless otherwise agreed to by the parties. There is no need to file the franchise application annually.

4.2.6 SUBDIVISIONS

Upon completion and acceptance of the subdivision or industrial streets, the utilities that are located within the State right-of-way shall be franchised in accordance with the existing countywide Public Utility Annual Master Franchise for each individual utility. Future work performed in that development will require only a utility construction permit. Please refer to the *Standards and Regulations for Subdivision Streets and State Highway Access* for requirements regarding subdivisions.

4.2.7 FREEWAY RIGHT-OF-WAY

(4.2.7.1) Only in exceptional cases are utilities granted a Utility Construction Permit to cross freeway right-of-way on new locations, and rarely are they permitted to run longitudinally on freeway right-of-way.

(4.2.7.2) A utility will be permitted along a freeway on a new location only under strictly controlled conditions. An application for permission to use or occupy the freeway right-of-way must be directed to the District Public Works Section.

(4.2.7.3) The application must address the following:

1. (4.2.7.3.1) the direct and indirect environmental and economic effects of any loss of productive agricultural land which may result from disapproving the use of the right-of-way,
2. (4.2.7.3.2) the utility's compliance with the provisions of this manual and AASHTO policies as referred to in Appendix D,
3. (4.2.7.3.3) why any other utility location would be extremely difficult and unreasonably costly for the utility consumer and

4. (4.2.7.3.4) how the utility's installation on the freeway right-of-way will not adversely affect the design, construction, stability, traffic safety, or operation of the freeway.

(4.2.7.4) The District Public Works Section will assess the situation and send the application with a recommendation and justification to the Utilities Engineer for coordination and comment. The Utilities Engineer will then review the application and provide the necessary coordination. Next, the application will be sent to the Assistant Director, Engineering Support for review.

4.2.8 COORDINATION BETWEEN UTILITY AND STATE

Both the Department and the utility company representatives need to exchange information regularly to help avoid conflicts between utility company projects and Department projects in terms of location, construction, or method of installation.

4.3 USE AND OCCUPANCY AGREEMENTS

4.3.1 PURPOSE

The Use and Occupancy Agreement (shown in Appendix B) is to be used for privately or individually owned facilities that are located on or across a State-maintained roadway. For example, if a landowner owns both sides of a State roadway and needs to convey irrigation lines, water lines, gas lines, etc., between the properties, the landowner and Department must execute a Use and Occupancy Agreement.

The Utility Use and Occupancy Agreement provides the Department with information about the facilities and sets forth their conditions. The owner must obtain a Utility Construction Permit for any construction, maintenance, or repair.

4.3.2 CONDITIONS

The Use and Occupancy Agreement provides the Department with information about the crossing and sets forth the conditions for the facilities. Only crossings will be allowed; longitudinal lines will not be permitted.

Signs will be provided by the Department to mark the utility crossing at each right-of-way line. Furnishing the mounting post and installation in accordance with Department requirements is the responsibility of the utility owner.

4.3.3 PREPARATION

A Use and Occupancy Agreement must be prepared by the owner, in triplicate, for each installation where a facility is placed on a State-maintained roadway.

4.3.4 PROCESSING

The Utility Use and Occupancy Agreement is then processed according to the following steps:

1. (4.3.4.1) The agreement is reviewed by the appropriate District Public Works personnel for completeness, accuracy, and compliance with the provisions contained in this manual.

2. (4.3.4.2) The District Public Works Section reviews the agreement and forwards a copy with sketches to the Utilities Engineer for review.
3. (4.3.4.3) The Utilities Engineer reviews the information and makes comments to the District Public Works Section.
4. (4.3.4.4) The District Public Works Section approves and signs the agreement after all corrections have been made, and then returns one copy to the applicant, sends one copy to the Utilities Engineer, and retains one copy.
5. (4.3.4.5) In event of a dispute, the Chief Engineer has final approval.

4.4 CONSTRUCTION PERMITS

4.4.1 PURPOSE

A Utility Construction Permit form (Appendix B) must be completed for all utility construction not performed in conjunction with a DelDOT construction project. A permit is required if utility work is done in advance of the construction project where DelDOT Construction has not yet been assigned. The permit is used to secure the District Public Works Section's approval of the details controlling construction activities. An executed Public Utility Annual Master Franchise shall be on file prior to submission of a construction permit application for Public Utilities. A privately owned facility must have a Utility Construction Permit and a Use and Occupancy Agreement before any type of installation, repairs or relocation.

To apply for a permit, contact the appropriate District Public Works Office:

- **South District Public Works - Sussex County:** **302-853-1340**
- **Central District Public Works - Kent County:** **302-760-2473**
- **North and Canal District Public Works-New Castle County:** **302-326-4679**

North District: Area north of and including I-95 and I-495 (except area west of Route 7, south of Route 2), including the City of Wilmington.

Canal District: Area south of I-95 and I-495 (including west of Route 7 and south of Route 2 to Kent County, including the City of Newark.

Usually, four sketches or plans must be attached to the construction permit application upon submittal. However, it is best to contact the District to see if there have been any changes to the requirements.

4.4.2 ELECTRONIC PERMITS

A computerized permit process intended for large users may supplement the construction permit process. The utilities wishing to use the system will need to execute a letter agreement with the Department specifying the conditions of the electronic permits.

4.4.3 REQUIREMENTS

A Utility Construction Permit is required any time utility construction work (including excavations or openings) will disturb anything on the roadway or State right-of-way. The permit is necessary each time a facility is upgraded or rebuilt, or an installation is added (excluding services). Project Design Work (as defined in Section 3.1) is excluded from this requirement except in cases when Utility Work is performed in advance of construction or the Department requests test holes for the locations of utilities. The District may waive the permit requirement for test holes.

Permits for Public Utilities will be issued only if a Master Franchise is in force. Private owners of facilities must have a Use and Occupancy Agreement along with a permit. The new permit request must show the existing and proposed installation.

A utility that performs work on the State right-of-way longer than one working day to repair or adjust an existing facility-or that disturbs the roadway-must have a construction permit. If the work takes less than one day, and does not disturb the roadway, a permit is not required. However, the utility must notify the District Public Works Office of any lane closure on any roadway outside of a subdivision before starting work. The notification must include the location and type of work to be performed.

In an emergency, the utility must promptly notify the District Public Works Office. The utility is responsible for communicating the type of emergency and location of the work to be performed and other pertinent information. The utility must submit a construction permit to the District Public Works Office as soon as possible. **In case of an emergency during normal business hours, call the District Public Works numbers listed in Section 4.4.1. After normal business hours, please call:**

- **New Castle County: 302-323-1111**
- **Kent County: 302-760-2473**
- **Sussex County: 302-855-1111**

4.4.4 FEES

No fees are authorized at this time.

4.4.5 PREPARATION

4.4.5.1 Utility Construction Permits are to be prepared in four copies (unless submitted electronically) by the utility company and submitted to the office of the District Public Works Section along with four copies of plan. The sketches or plans must show the:

1. (4.4.5.1.1) width of the right-of-way,
2. (4.4.5.1.2) type of roadway,
3. (4.4.5.1.3) width of traveled way,
4. (4.4.5.1.4) distance from the crossroad or side road to the installation,
5. (4.4.5.1.5) distance from the centerline of the roadway to the installation,

6. (4.4.5.1.6) type of shoulder,
7. (4.4.5.1.7) width of shoulder,
8. (4.4.5.1.8) drainage system in the utility area,
9. (4.4.5.1.9) trench and restoration details,
10. (4.4.5.1.10) north arrow, scale and legend, and
11. (4.4.5.1.11) railroads crossing roadways.

(4.4.5.2) In addition, all sketches for pressure pipeline installations must specify the class of transmittant, the maximum working pressure, the maximum design pressures, and the design standards for the carrier.

(4.4.5.3) When a Utility Construction Permit is needed after a DelDOT highway contract has been awarded, the utility must obtain written permission from the DelDOT contractor to work in the project area. This policy includes any utility work not caused by the construction or improvement of a highway. For an exception to be made, the utility must have written permission from DelDOT to perform such work. To give this written permission, DelDOT must first obtain a satisfactory waiver, release, and quit claim from the State's contractor. It must cover all damages and all defenses whatsoever for delays caused by the utility work. If a dispute arises or the contractor will not provide the appropriate document, then the District Public Works Section has the option of setting a time frame in which the utility may work.

4.4.6 PROCESSING

The Utility Company submits a permit application to the District Public Works Office. The District assigns a permit number and distributes the originals as follows:

- original to the responsible District Public Works personnel,
- two copies to the utility, and
- one copy to the State Inspector

Utility Construction Permits are required for work to be performed on state right-of-way or state maintained roads within the incorporated limits of a municipality. The utility must also have approval of the municipality.

4.5 UTILITY CONSTRUCTION, RELOCATION, OR REPAIR NOT DUE TO HIGHWAY CONSTRUCTION

(4.5.1) A public utility must not start construction of a new installation, repairs, or relocation until a Utility Construction Permit has been issued and a Master Franchise is in force. A privately owned facility must have a Utility Construction Permit and a Use and Occupancy Agreement before any type of installation, repairs or relocation.

(4.5.2) The District Public Works office must be notified at least one working day before the start of construction. (Notification may be given in writing, orally, or by fax.) The information transmitted

must include the starting date, road number, and permit number. Refer to Section 4.4.3 for further details including emergency situations.

(4.5.3) Permits issued by the State may be revoked whenever state authorities ascertain a threat to the traveling public. Other causes for revocation may include--but may not be limited to--misuse, noncompliance with State requirements, or improper maintenance of traffic. Depending on the circumstances, any permit application may be denied.

(4.5.4) The utility company or its contractor must have a responsible representative at the job site at all times to supervise the work. Information on the Utility Construction Permit must be available to this responsible representative.

(4.5.6) Utilities must notify "Miss Utility" at least two working days before starting work. A "working day" shall mean every day, except Saturday, Sunday and state, federal and recognized operator holidays.

4.6 NONCOMPLIANCE

(4.6.1) If a utility fails to comply with any of the conditions, restrictions, or regulations prescribed by DelDOT and stated in this manual, the following actions will be taken:

1. (4.6.1.1) The State will notify the utility, in writing, of the noncompliance. The State may also impose such actions, as it may deem appropriate, including an immediate stop work order until the utility complies.
2. (4.6.1.2) The utility must correct the noncompliance within 30 days after receiving written notice from the State.
3. (4.6.1.3) After the thirty 30 day period, the State will be required to take any action necessary to protect the safety of the traveling public. This may include restoration of roads or taking possession of and removing poles, pole lines, wires, pipelines, conduits, fixtures, or other structures or property owned by the utility and located on State right-of-way.
4. (4.6.1.4) The utility will be responsible for all costs and expenses associated with the necessary action to correct the situation.

Chapter 5

Utility Adjustments for Highway Construction

Existing utilities along highways that are to be reconstructed may sometimes be allowed to remain in place, however they usually must be adjusted or relocated to accommodate the construction work and the reconstructed highway.

Utility facilities must not be in the way of the reconstruction work in order to remain in place. In addition, their future maintenance must not create a hazard for the traveling public. The Utilities Engineer shall determine whether they may remain in place.

In general, utilities are not reimbursed by the State for the cost of adjusting or relocating their facilities. In accordance with Section 143, Title 17, Delaware Code, however, some work is reimbursable. Both cases are discussed in this chapter.

5.1 PRECONSTRUCTION COORDINATION

The Utilities Section shall manage coordination of the design process for utility relocations and adjustments associated with highway construction projects. Utility companies shall provide information to the Department for all of their facilities within the existing or proposed right-of-way. The information provided will include the facility types, sizes, and locations.

5.1.1 CONCEPT PHASE

In the concept phase, the Department Project Manager is responsible for defining the limits of the right-of-way necessary to construct, operate, and maintain the highway and plan for utility relocation. To minimize design time and avoid costly revisions, the Project Manager shall consult with the Utilities Section early in the design process. The Project Manager collaborates with the assigned Utility Coordinator to determine potential utility impacts. The Project Manager and Utility Coordinator shall determine the extent and timing of utility designation.

The Utility Coordinator identifies existing utilities and contacts existing utility companies as necessary. The utility companies shall submit any easement or "prior rights" documentation to the Utilities Engineer. The purpose of the submittal is to establish a compensable interest if the utility is seeking reimbursement in accordance with Delaware Code. An executed agreement between the Department and the utility shall be in place for all eligible adjustments before any utility work can begin. Refer to Section 5.3 for more information regarding agreements. *Note:* It is the sole responsibility of the utility to provide the documentation of a compensable interest and not the Department's responsibility to seek it.

5.1.1.1 UTILITY DESIGNATION

The Project Manager and the Utility Coordinator will determine whether utility designation will be performed through MISS UTILITY, a Subsurface Utility Engineering (SUE) consultant or if utility designation is not required. The Project Manager specifies the Federal Highway Administration (FHWA) quality level of the SUE process required for the design of the project. If test holes are required, the Project Manager also specifies the number of test holes needed. The FHWA quality levels are classified as follows:

- Level D information is retrieved from existing utility records.
- Level C involves surveying visible aboveground utility facilities and correlating this information with existing utility records.
- Level B involves the use of surface geophysical techniques to determine the existence and horizontal position of underground utilities.
- Level A involves the use of non-destructive digging equipment at critical points to determine the precise horizontal and vertical position of underground utilities, as well as the type, size, condition, material, and other characteristics.

The American Society of Civil Engineers *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data CI/ASCE 38-02* shall be followed for the classification and depiction of subsurface utility data.

The results of the designation shall be forwarded to the Project Manager for incorporation into the plans and cross sections. The Project Manager, in coordination with the Utility Coordinator, shall determine which conflicts cannot be avoided and discuss alternatives with the affected utility company. The utility companies shall identify potential problems that could affect the project schedule at this stage of the plan development.

5.1.1.2 SUBSURFACE UTILITY ENGINEERING (SUE) CONSULTANT

A Utilities Section SUE consultant or SUE consultant subcontracting to an approved Design Consultant may be utilized to acquire utility facility information. In all cases, the SUE consultant shall provide all information obtained from the approved tasks to the Project Manager, the approved Design Consultant for the project, and the DelDOT Utilities Section Coordinator. The SUE tasks may include utility designation, test holes, and coordination services. The SUE information includes, but is not limited to plans, test hole results, and review meetings.

The utilities are required to provide or verify the designation information on their facilities regardless of the Department's use of a SUE consultant.

5.1.2 SURVEY PLANS

The Project Manager will provide two sets of survey plans per utility to the Utility Coordinator for distribution to each utility company. The utility will identify its existing and known abandoned facilities on the plans, indicating whether they are aerial, surface, or buried underground. The utility will also include information indicating:

- the sizes of pipes,

- number of conduits,
- approximate depths of the facilities,
- private easements,
- any private services that may be affected,
- the identity of other utility company facilities (attached, housed, aerial or underground),
- any other information pertinent to the facilities,
- and any planned relocations or reconstruction to occur within the limits of the project.

The utility company must return the information to the Utilities Section within 30 days of receipt unless a later date is agreed upon by the Project Manager and the utility representatives.

5.1.3 PRELIMINARY PLANS

(5.1.3.1) The Project Manager shall prepare preliminary plans showing the proposed alignment, typical sections, profile, schematic drainage alignment, existing right-of-way, proposed right-of-way, easements, clear zone, test hole data on cross-sections (if obtained), existing utility facilities from the survey data, and other details. The American Society of Civil Engineers *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data* CI/ASCE 38-02 standards shall be followed for the classification and depiction of subsurface utility data.

(5.1.3.2) The Project Manager will provide the Utilities Coordinator with two sets of preliminary plans to distribute to each utility involved in the project. If current, the utility information on the previously marked Survey plans will be shown on the preliminary plans.

(5.1.3.3) The utility company is required to mark the preliminary plans with any additional right-of-way necessary for relocation of facilities. The following is typically requested with the marked Preliminary Plans:

1. (5.1.3.3.1) suggested design modifications that would eliminate relocations,
2. (5.1.3.3.2) description of utility relocations along with estimated timeframe for construction,
3. (5.1.3.3.3) list of stations and offsets where test holes are needed,
4. (5.1.3.3.4) identification of any permits that may be required, and
5. (5.1.3.3.5) information on any other utility's facilities located on its poles.
6. (5.1.3.3.6) joint use or third party installation requirements.

(5.1.3.4) A utility may be dependent upon another utility's plans and actions in order to complete the work. The Utility Coordinator should be made aware of this condition in order to ensure efficient coordination of the project.

(5.1.3.5) The utility company owning the pole, duct system, etc is responsible for coordinating the relocation of any renters or lessees as required by the Telecommunication Act of 1996.

The utility company shall return the proposed work plan on one set of plans provided by the Department within 30 days of receipt. If a site meeting is held, the plans will be returned within two weeks of the meeting. In either case, a later date may be agreed upon by the project manager and the utility representatives.

5.1.3.6 COORDINATION AND SITE MEETING

If a subsequent site meeting is held, the utilities shall return preliminary plans at the meeting or within two weeks of the meeting. The Utilities Section will forward a copy of the plans to the Project Manager.

The Project Manager, in coordination with the Utility Coordinator and the utility company's representative, will review the preliminary plans for potential conflicts with existing utilities, and will determine which conflicts cannot be avoided. Any proposed signage or street lighting to be done in conjunction with the project shall also be reviewed and coordinated. If power lines must be relocated, the Project Manager shall coordinate the lighting needs, street lighting, signalization, traffic coordination installations, Traffic Impact Study (TIS) recommendations, etc. with the power company. DelDOT should apply for any necessary electric service from the utilities at this stage. If feasible, the utility poles may serve as light standards as well as carry the lines. Joint use agreements and location of DelDOT facilities shall be clarified as well.

5.1.3.7 REIMBURSABLE WORK

If reimbursable work is involved and the letter agreement has been executed, the utility shall provide a cost estimate for the preliminary engineering (PE). The Utilities Engineer may elect to waive a detailed cost estimate for Preliminary Engineering.

The Utilities Engineer shall grant a notice to proceed for preliminary engineering upon Departmental authorization of funding. A notice to proceed must be issued before the utility begins preliminary engineering in order for the preliminary engineering costs to be considered reimbursable by the Department.

Within 30 days of the issuance of the notice to proceed and receipt of preliminary plans, or the date agreed to by the Utilities Engineer, the utility company shall supply a Utility Plans, Specifications and Estimate (Utility PS&E) package, consisting of plans, specifications, and estimate and four sets of marked color-coded plans. *Utilities may submit color-coded plans electronically, however they must be printable on standard size paper.* These plans indicate:

1. existing to remain,
2. existing to remove,
3. proposed reimbursable and
4. proposed non-reimbursable.

Refer to Section 5.3 for further details on plan preparation and reimbursable work.

The Utilities Engineer will review the Utility PS&E package and verify any proposed reimbursable work.

5.1.4 SEMIFINAL PLANS

The Project Manager will give the assigned Utility Coordinator two sets of semifinal plans to distribute to each utility involved in the project. Any unresolved conflicts with the proposed construction and the utility's proposed relocation scheme need to be resolved.

The proposed relocation plan will be shown on the semifinal plans with any corrections to existing facilities and submitted along with the utility company's proposed Utility Statement (Resume of proposed work).

The Utility Statement (Resume of proposed work), submitted by the utility company, shall contain:

1. a description of the existing facilities;
2. any proposed changes, adjustments, or relocations;
3. the location, of the changes using station count and offsets;
4. quantities of borrow Type C if necessary;
5. the proposed time schedule (in calendar days) for completing the alterations, adjustments, or relocations for each phase of the Project's Sequence of Construction/ Maintenance of Traffic Plan; and
6. any other information that may impact the state's contractor.

The utility will return one set of semifinal plans with the changes marked, the proposed relocation plan, and their proposed Utility Statement to the Utilities Engineer within thirty (30) days of receipt unless a coordination meeting is requested. If a coordination meeting is scheduled, the plans should be returned within two weeks of the meeting. In either case, a later date may be agreed upon by the project manager and the utility representatives. The Utilities Engineer will verify any proposed reimbursable work.

The DelDOT Project Utility Statement is subsequently prepared from all of the Utility Statements submitted by each of the public utilities. The DelDOT Project Utility Statement includes construction phases in which the work will occur and may include a list of locations for open cutting of roads. The Utilities Engineer will forward the DelDOT Project Utility Statement to the Project Manager. The applicable proposed relocation plans will also be forwarded.

The DelDOT Project Manager shall generate a bar chart showing the road construction sequencing and how it coordinates with the utility relocation sequencing. The Utilities Engineer with the concurrence of the Project Manager and Regional Construction Engineer may waive the bar chart requirement for minor projects.

The Project Utility Statement shall be submitted with the bar chart to construction. The Project Manager shall include the utility costs in the project cost estimate and append a construction sequencing bar chart, which does not contain specific dates. The following note shall be placed on the bar chart:

"The information shown in the Contract Documents, including the Utility Statement and the Utility Schedule contained herein, concerning the location, type and size of existing and proposed

utilities, their locations, and construction timing has been compiled by the preparer based on information furnished by each of the involved Utility Companies. It shall be the responsibility of the State's Contractor to verify all information and coordinate with the Utility Companies prior to and during construction, as specified in Section 105.09 of the *Standard Specifications*." Other general notes referencing contractor expectations to be included on the DelDOT Utility Statement are shown in Appendix H.

The Project Manager shall sign approval of the DelDOT Utility Statement and return it to the Utilities Engineer.

If necessary, a coordination meeting will be scheduled with affected utility companies to review the Utility Statements and sequencing bar chart. Utility companies shall modify their Utility Statements based upon the coordination meeting. Final Utility Statements from the utility companies are to be submitted to DelDOT within 30 days of the meeting so that a revised DelDOT Utility Statement can be prepared.

5.1.5 FINAL PLANS

When the plans are completed and the project is advertised, one set of final plans will be forwarded to each utility involved in the project. The Construction Engineer shall issue the notice to proceed with the relocation of facilities at or following the Preconstruction meeting.

For reimbursable alterations, adjustments, or relocations, the Utilities Engineer shall notify the utility, Project Manager, and Construction Region when the proposed utility work has been authorized. The Utilities Engineer will also direct the utility to proceed with its alterations, adjustments, or alterations. See Section 5.3 for further details.

5.2 NON-REIMBURSABLE WORK

Adjustments to utility facilities occupying highway right-of-way by Master Franchise are not eligible for reimbursement. Exceptions are discussed in Section 5.3(55.3). If the facilities have to be relocated due to the Department's project, the Department will provide right-of-way for relocation of the facilities. The relocation of the utility facilities will be at the sole expense of the utility.

5.3 REIMBURSABLE WORK

5.3.1 UTILITY REIMBURSEMENT ON HIGHWAY CONSTRUCTION PROJECTS

Section 143, Title 17, Delaware Code determines the policies governing expenses of utility adjustments, removals, and relocations. A copy of Section 143 is located in Appendix G (F). The most recent copy of the Delaware Code may be found at Online Delaware Code at <http://www.delcode.state.de.us/>.

Utilities are required to use the procedures established by FHWA for reimbursement. These are explained in the U.S. Department of Transportation Federal Highway Administration *Program Guide: Utility Relocation And Accommodation on Federal-Aid Highway Projects* including amendments.

5.3.1.1 FUNDING

The State shall fund adjustments, alterations, or relocations caused by DeIDOT reconstruction, construction, relocation, repair, or maintenance of a public highway in the following circumstances:

5.3.1.1.1

**Governmental
Facilities**

Governmental Facilities - The facilities are owned and/or operated by a public utility of a municipality or of any governmental body or political subdivision of the State.

Appendix B - Agreement 86U-04

Appendix B - Agreement 86U-05

Appendix B - Agreement 86U-06

Appendix B - Agreement 86U-07

5.3.1.1.2

**Court of Chancery
Decision**

Court of Chancery Decision - The facility is private but located on fee simple real estate owned by the utility, or on a documented easement granted by a third party to the utility.

Appendix B - Agreement 86U-04

Appendix B - Agreement 86U-05

Appendix B - Agreement 86U-06

If the utility is the owner of the right-of-way in fee-or if the facility is located legally on private property-and this property is acquired by the State for the reconstruction of a highway or structure, the State will assume liability for the cost of altering, adjusting, or relocating the existing facilities. The utility must provide documentation in the form of a copy of the record from the Recorder of Deeds. The utility may request "prior rights" rather than compensation by the Department before the Department extinguishes the existing easement. Documentation must be completed by DeIDOT Real Estate personnel and subsequently submitted to the Recorder of Deeds in the county in which said facilities are located.

5.3.1.1.3

"Prior Rights"

"Prior Rights" - The utility may have "prior rights". Prior rights exist when a utility is determined to have legally occupied a public right-of-way prior to the time such right-of-way was conveyed to or acquired by the Department. Please see Section 5.3.3 for further details.

5.3.1.1.4

"Second Move"

"Second Move" - The Department requires a second alteration or relocation of the same nongovernmental public utility facility within ten years from the date of completion of the initial alteration or relocation.

Appendix B - Agreement 86U-38

5.3.1.1.5

Change in Plans

Change in Plans - The Department alters its plan of construction before project completion, requiring a nongovernmental public utility to relocate its facility that has already been partially or fully relocated in connection with the project. The Department shall reimburse the public utility for the cost of altering or relocating in relation to the change in the Department plans. An approved Utility PS&E is required before a notice to proceed for this work can be issued.

Appendix B - Agreement 86U-38

5.3.1.1.6

Delay

Delay - The Department cancels or does not commence a highway construction, reconstruction, relocation, repair, or maintenance project within a period of two (2) years from the date of authorization to proceed with nongovernmental utility work.

Appendix B - Agreement 86U-38

5.3.1.1.7

Temporary
Facilities

Temporary Facilities - The Department requests a temporary alteration or relocation of the nongovernmental public utility facility. For example, if facilities need to be relocated temporarily for a bridge replacement and will need to be moved again when the construction project is complete.

Appendix B - Agreement 86U-38

The amount of reimbursement to be paid to a public utility in Section 5.3.1.1 is the entire cost of alteration or relocation minus any betterment of the altered or new facility and any salvage value derived from the old facility.

5.3.1.2 DISCRETIONARY FUNDING

Decisions to fund utility relocations and adjustments in the following circumstances are left to the discretion of the Secretary of Transportation. The Department may enter into an agreement with a nongovernmental public utility by reason of highway construction, reconstruction, relocation, repair, or maintenance project as follows:

5.3.1.2.1

**Special
Circumstances**

Special Circumstances - The Department may enter into an agreement with a nongovernmental public utility to reimburse for up to 50% for alterations or relocation if the facility is located within a highway right-of-way or public right-of-way by grant or franchise. The alteration or relocation must be necessitated by special circumstances with written approval from the Secretary of the Department of Transportation. A copy of the written determination of the Secretary shall be forwarded to the Public Service Commission for filing with the public records of the Commission.

Appendix B - Agreement 86U-36

5.3.1.2.2

Unique Materials

Unique Materials - The Department may enter into an agreement if the nongovernmental public utility construction specifications require the use and/or storage of unique materials or supplies in advance of the construction contract.

Appendix B - Agreement 86U-37

5.3.1.2.3

Advance Move

Advance Move - If the Department determines it is beneficial, the Department may enter into an agreement to reimburse a nongovernmental public utility for increased expenses incurred as a result of alteration or relocations of a facility in advance of the commencement of a highway construction, reconstruction, relocation, repair or maintenance project.

Appendix B - Agreement 86U-37

5.3.1.2.4

State Contractor

State Contractor - The Department may enter into an agreement with a nongovernmental public utility for work to be performed by the state contractor or subcontractor for specific facility alteration or relocation construction items identified and approved for construction. As part of the agreement, the public utility must agree to reimburse the Department or the Department's contractor or subcontractor for the construction items.

Appendix B - Agreement 86U-39

5.3.1.2.5

**Net Cost Savings
Enhancement**

Net Cost Savings Enhancement - The Department may enter into an agreement with a nongovernmental public utility to reimburse the utility for a specific facility enhancement if in the judgment of the Department, the enhancement will result in net cost savings to

the Department, will expedite the project, or will otherwise result in increased public benefit and convenience.

Appendix B - Agreement 86U-39

5.3.1.2.6

Support and Protection

Support and Protection - The Department may enter into an agreement to reimburse the utility to design and inspect facility Support and Protection as necessary per the OSHA Technical Manual Section V Chapter 1 and the Delaware Code Title 26 Section 806. Costs shall be reimbursed on a force account basis.

Appendix B - Agreement 86U-04

Appendix B - Agreement 86U-05

Appendix B - Agreement 86U-06

Appendix B - Agreement 86U-07

5.3.2 BETTERMENT

Betterment is defined as any upgrade to a facility being relocated, made solely for the benefit of and at the election of the utility and not attributable to highway construction as determined by the Utilities Engineer. The cost of a betterment or increased size in facilities is only reimbursable in accordance with FHWA regulations (*Program Guide: Utility Relocation and Accommodation on Federal Aid Highway Projects* and *Code of Federal Regulations Title 23 Part 645*) or as allowed by specific agreements enabled by Delaware law.

When seeking reimbursement with betterment involved, the utility shall submit two (2) Utility PS&E packages. The first detailed estimate with color-coded plans indicates relocation or adjustment in kind and the second shows the facility size increase or betterment. Right-of-way acquisition and salvage value shall be included where applicable on all estimates. Refer to Appendix C for details.

5.3.3 PRIOR RIGHTS

Prior Rights, as mentioned above, exists when a utility's existing facilities have a compensable right to be located on DelDOT right-of-way. Prior Rights occur in the following circumstances:

1. (5.3.3.1) The utility facility was constructed on private property through a recorded easement of record in the Recorder of Deeds office and the facility and its easement are encompassed by a DelDOT project.
2. (5.3.3.2) The utility facility was relocated onto or remained in DelDOT right-of-way under a previous project and at the 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 must furnish a copy of the utility agreement stating the arrangement previously agreed to by DelDOT.)

In cases of Prior Rights, the Department must approve all documentation. A flowchart of the process is located in Appendix K.

Utilities normally do not have compensable interest or "Prior Rights" in subdivisions. The right-of-way in subdivisions belongs to the State upon recordation.

5.3.4 REIMBURSABLE WORK PROCESS

During the process of plan review discussed in Section 5.1, reimbursable work may be discovered. If the utility and the Utilities Section agree that reimbursable work will be involved, then the following must occur:

- The State and the utility shall agree in writing as to the obligations and responsibilities of each party.
- The agreement shall incorporate the conditions of occupancy for each party. The agreement shall also include the rights vested in the State and the rights and privileges retained by the utility.
- The interest to be acquired by or vested in the State in any portion of the rights-of-way of a highway project to be used, occupied, or vacated by utilities shall be adequate in nature and extent for the construction, safe operation, and maintenance of the project.

5.3.5 UTILITY ADJUSTMENT AGREEMENTS

Utility alteration, adjustment, or relocation agreements are used where the Department will be responsible for the cost of the work. An executed agreement shall be in place before any work begins when State and/or federal funds are used to pay for all or part of eligible utility adjustments. Samples of these letter agreements can be found in Appendix B.

5.3.5.1 AGREEMENT REQUIREMENTS

Utility adjustment agreements must include:

- the incorporating limits or areas to be served;
- the responsibility of each party;
- the terms and conditions regarding the relocation, adjustments, or reconstruction;
- the action to be taken in case of noncompliance with State requirements; and
- other provisions as deemed necessary to comply with State laws and regulations.

Work incidental to utility relocations shall be performed by the utility with its own forces including a utility's open-end and/or continuing construction contractor, or by an approved utility contractor, unless such work is included in the Department's construction contract by separate agreement. When a utility obtains a contractor for the relocation work, the utility, federal and state regulations apply.

5.3.5.2 PREPARATION OF AGREEMENTS

When it is determined that a utility is to be reimbursed by the Department for a utility adjustment, the Utilities Section will prepare a letter agreement. The agreements are based upon State law and Court of Chancery decisions authorizing reimbursement, the type of ownership of the utility, state and/or federal participation, and the process for design and installation. Appendix B provides samples of letter agreements used by the Department.

The Utilities Section will prepare the appropriate letter agreement for adjustment work. The agreement will include preliminary engineering that may be accomplished as part of the Department's project, either by the utility's own forces or by its contractor. The preliminary engineering is considered part of the Department's project because the existing locations and the proposed adjustments or relocations are incorporated in the Department's construction plans.

The proposed letter agreement is forwarded to the Department's Deputy Attorney General for review/signature and/or comments. Any changes made by the attorney are incorporated in the agreement. Four original letter agreements are forwarded to the utility for signature and seal affixation, and returned to the Utilities Engineer. The Chief Engineer or the Assistant Director of Engineering Support as designee provides signature approval with the final authorization provided by the Director of Technology and Support Services. The agreement is considered executed when the Department's seal is affixed.

The distribution of the executed agreement is as follows:

- original to the Director of Technology and Support Services,
- original to the utility,
- original to DelDOT Finance (upon funding authorization request, i.e. Utility PS&E submission), and
- original retained by the Utilities Section.

Executed agreements are a part of the Utility PS&E submissions. The approved estimate and color-coded plans of the work involved are attached and considered part of the agreement.

5.3.5.3 UTILITY PLAN PREPARATION

The Project Manager will furnish the Utilities Engineer with construction plans and cross-sections for review. When reimbursable work is involved, the plans shall be used by the utility to estimate the scope of the utility work to be done. Reimbursable work is described in Section 5.3. The utility shall submit the preliminary engineering (PE) estimate for any engineering required to design the alteration, adjustments and/or relocation. The Department Utilities Engineer may elect to waive a detailed cost estimate for preliminary engineering. A sample of the engineering estimate is located in Appendix C.

Utilities are required to use the procedures established by FWHA for reimbursement. The procedures are explained in the U.S. DOT FHWA *Program Guide: Utility Relocation And Accommodation on Federal-Aid Highway Projects* including amendments and the *Federal-Aid Policy Guide (FAPG) Code of Federal Regulations Title 23*.

The PE estimate shall become part of the letter agreement mentioned above in Section 5.3.5.2. When the PE estimate is approved, a notice to proceed will be provided to the utility to begin the design for the adjustments and/or relocations. The utility shall prepare the Utility Plans, Specifications and

Estimate (Utility PS&E) for the relocation or adjustment and forward them to the Utilities Engineer for review.

Once the Utility PS&E package is reviewed and approved, it is forwarded to DeIDOT Finance for funding authorization and approval. The Utilities Section must issue a notice to proceed before the utility can begin construction work. Any work performed prior to notice to proceed shall be at the sole expense of the utility.

5.3.5.4 EMPLOYMENT OF A CONSULTANT FOR UTILITY PS&E

As mutually agreed to by the Department and utility, preliminary engineering activities associated with utility relocation work may be done by an engineering consultant selected by the utility, with the approval of the Department. A utility must submit a letter to the Utilities Engineer requesting authorization to obtain a consultant to provide preliminary engineering services for utility relocations. The request shall state the type of work the consultant is expected to perform during the utility relocation for the project-i.e. prepare utility plans, specifications, estimates; inspect materials; and supervise work. The request shall meet the provisions established by federal procurement regulations of the U.S. DOT FHWA, and the applicable regulations of the *Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects*. 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.

When a consultant is to prepare the Utility Plans, Specifications and Estimates, the utility must provide the DeIDOT Utilities Engineer with preliminary plans, estimates, and a fee schedule from the consultant for performing the work. (The utility is required to review and approve the data before submitting it to the Utilities Engineer.) After Departmental review, the information may be forwarded to FHWA for concurrence.

When the estimate and other data are acceptable to the State (and to FHWA, if applicable) the utility is notified to prepare and submit to the Utilities Engineer the specifications, estimates, and a draft of the contract between the responsible consultant and the utility. The draft must stipulate the work to be done under the agreement and the method of payment for preparing the Utility PS&E package.

A consultant fee that is based on a percentage of the work to be performed will not be approved.

When federal participation is involved in a highway construction project, the agreement with the consultant shall conform to federal procurement regulations and appropriate U.S. DOT regulations. Upon approval of the draft, the State may authorize the utility to execute the agreement with the consultant.

5.3.5.5 PROCESSING UTILITY PS&E PACKAGES

(5.3.5.5.1) The Utility Plans, Specifications and Estimates (Utility PS&E) submitted by the utility shall include:

- 1) Utility Statement (See Section 5.1.5)
- 2) a detailed estimate of the work to be performed. See Appendix C for sample.
- 3) marked color coded plans indicating:
 - a) existing to remain (green)

- b) existing to be removed (red)
 - c) proposed reimbursable (blue)
 - d) proposed non-reimbursable (yellow)
 - e) Note: Other colors can be used provided they are legible and clearly labeled in the legend.
- 4) the terms under which the utility is to cross or otherwise occupy the highway rights-of-way;
 - 5) a description of the size, type, nature, and extent of each utility company's facility to be located within the highway rights-of-way;
 - 6) a description of each installation's construction requirements, traffic protection, maintenance, access restrictions, and any special conditions;
 - 7) adequate drawings or sketches that show the existing and proposed locations of the utility facility, including the:
 - a) facility locations within the highway right-of-way with respect to the existing or planned DelDOT improvement, the traveled way, or the right-of-way, and
 - b) control-of-access lines and approved access points; and
 - c) the responsibilities of the utility for future adjustments of its facilities in order to accommodate Departmental improvements.

(5.3.5.5.2) Four complete Utility PS&E packages shall be forwarded to the Utilities Engineer. The utility may in submit the color-coded Utility PS&E package electronically if in an acceptable format. Upon review and approval of the package for completeness and accuracy by the Utilities Engineer, the Utilities Section requests funding authorization and notifies the Project Manager. One copy of the Utility PS&E package is forwarded to the Construction Region for their use in concurring that the work is done in accordance with the Utility PS&E. See Section 5.4.4 for information regarding inspections.

5.4 CONSTRUCTION COORDINATION

5.4.1 AUTHORIZATION OF UTILITY WORK

The Utilities Engineer will notify the utility, Project Manager and Construction Region when the proposed utility work has been authorized. The Construction District directs the utility to proceed with its alterations, adjustments, or relocations.

When State or federal funds will pay all or part of the costs of adjustments, all work done by the utility's own forces shall be on a force account basis.

When a utility's request to perform the work by competitive bid has been approved, the following steps shall be taken:

- Two copies of the bid tabulation, with the preliminary estimate included, are forwarded to the Utilities Engineer.
- One copy of the bid tabulation is forwarded to FHWA, if applicable.
- After approval from the State and FHWA, (if applicable) the utility is instructed to award the contract.
- An executed copy of the contract between the utility and the contractor is furnished to the Utilities Engineer.
- When a utility requests permission to perform the work with a current continuing contract, using an outside contractor, the following shall take place:
 - The request is supported by an estimate based on the applicable contract unit prices.
 - After approval by the State and FHWA, (if applicable) the utility is instructed to proceed with the work.
 - An executed copy of the contract between the utility and its contractor is furnished to the Utilities Engineer.

5.4.2 COORDINATION DURING CONSTRUCTION

5.4.2.1 UTILITY PRECONSTRUCTION CONFERENCES

Representatives of each utility having facilities within the project limits, along with representatives of the contractor, may be required to meet with the Construction Region Engineer's representative to discuss in detail the effect that each utility's adjustment or relocation will have on the progress of the project.

5.4.2.2 PRECONSTRUCTION CONFERENCES

The Construction Region Engineer will notify the appropriate utilities, the "Miss Utility" Center, and the "Miss Utility" Representative, as to the place, time, and date that a preconstruction conference will be held.

5.4.2.3 CONTRACTOR'S SCHEDULE

The utility work on Department projects most often occurs simultaneously with the contractor's work and thus requires coordination. When this coordination is via a project utility meeting, a utility representative is required to attend. The utility and the contractor shall cooperate in scheduling work so that neither one is delayed by the other's operations. In addition, all traffic control for utility work must be performed according to DelDOT's *Traffic Control Manual* (Traffic Controls for Streets and Highways Construction, Maintenance, and Utility Operations) and coordinated with the immediate DelDOT project supervisor. This will be done to avoid conflicts and unnecessary disruptions in traffic flows through construction projects.

The utility is required to attend progress meetings called by the Construction Region Engineer or a designated representative to review progress on certain projects.

5.4.3 REVISIONS

This section refers to changes required to the plans or estimates after the notice to proceed is given. Occasionally, field conditions necessitate revision to a utility's approved plan of adjustment or relocation.

5.4.3.1 REVISION TO CONSTRUCTION PROJECT

Changes to Construction Projects and their impact on utility relocation costs shall be carefully considered before proceeding. Refer to the Section 5.3.1.1 summary of reimbursement to public utilities for "Second Moves" and "Change in Plans." The time involved, material availability, additional labor and utility costs shall be evaluated before changes are pursued.

The Utilities Engineer, Construction Engineer, and the Project Manager shall review any project plan revisions. Their approval is necessary in order to proceed with the revision.

5.4.3.2 REVISION OF UTILITY PLANS AND ESTIMATES

The utility shall forward a copy of the revised plan and/or estimate and the justification for the change for approval by the Utilities Engineer. Upon approval of the change, the Utilities Section shall request additional funds to cover the added cost.

5.4.3.3 CHANGE ORDERS

The Construction Region Engineer shall send copies of all change order correspondence and copies of all correspondence directed to the utilities, to the Utilities Engineer.

5.4.4 PROGRESS INSPECTIONS

Representatives of the Construction Region Engineer are responsible for inspecting the work performed by the utility including any utility work in advance of construction. Inspectors will monitor the material used, equipment used, and number and classification of personnel working at the location; and will keep daily logs showing a record of the same.

5.5 PAYMENT FOR WORK

5.5.1 PROGRESS PAYMENTS

5.5.1.1 UTILITY BILLING

The utility may submit progress billings for costs incurred after the executed utility agreement has been approved and notice to proceed has been received. The utility may also submit progress billings for the cost of materials stockpiled at the project site or specifically purchased and delivered to the utility for use on the project following similar approval. Any materials purchased or work performed prior to written authorization from the Utilities Engineer shall be done at the Company's sole expense. All invoices shall conform to the provisions of the *Federal-Aid Policy Guide (FAPG): Code of Federal Regulations, Title 23, Part 645*.

Billing documents shall be submitted to the Utilities Section. The Utilities Section forwards the invoice to the Construction Region Engineer for verification of work accomplished. The Utilities Section processes the payments after verification in accordance with Section 5.5.2.2. (5.5.5.2)

5.5.1.2 DELDOT BILLING UTILITY

When the Department agrees for utility alteration or relocation work to be performed by the state contractor or subcontractor, the Department may submit progress billings.

5.5.2 FINAL PAYMENT

5.5.2.1 FINAL BILL FROM UTILITY

A final and complete billing of all costs incurred will be made by the utility within six months from the last chargeable day of the project in compliance with the executed agreement. The statement of billing must follow the order of the items in the Utility PS&E identified as part of the executed letter of the agreement between the State and the utility. The statement shall be itemized to show:

- the State Contract Number, Federal-Aid Project Number, project location and the executed Utility Agreement Number,
- a brief description of work performed, identifying the Utility PS&E submission incorporated in project limits,
- the date on which the last work was performed on the last item of billed expense,
- a statement from the utility that it has or has not been paid in full for all reimbursable work performed,
- the totals for each of the following costs: labor, overhead costs, travel expenses, transportation, equipment, handling costs, material and supplies, and other services,
- salvage credits from recovered and replaced permanent material and recovered temporary material,
- the replacement cost or the original charge for temporary use of material,
- the location where the records and accounts billed can be audited, and the name of a contact person for auditing purposes,
- a copy of the as-built plans, and
- the final invoice specifying "final" and containing a summary of total project costs billed.

5.5.2.2 FINAL PAYMENT PROCESS

The utility shall provide three copies of the final invoice along with as-built plans. The final billing will be processed in the following steps:

1. (5.5.2.2.1) The Utilities Section will check the final billing for accuracy and adequate support documentation.
2. (5.5.2.2.2) The Utilities Section will review the documentation to assure that all items are eligible for State participation.

DELDOT UTILITIES MANUAL

3. (5.5.2.2.3) The Utilities Section will forward billing and as-built plans to the Construction Region Engineer for verification that all work covered by the final billing has been satisfactorily completed.
4. (5.5.2.2.4) The Utilities Section will process the final billing for payment after verification by the Construction Region Engineer.
5. (5.5.2.2.5) DeIDOT Audit is responsible for administering a final audit predicated on the relevant agreement and billing data upon notification and audit request from the Utilities Section.
6. (5.5.2.2.6) DeIDOT Audit will forward a copy of the completed audit report to the Utilities Section.
7. (5.5.2.2.7) The Utilities Section will inform the utility of the audit findings. The utility phase of the project is closed out after the Department notifies the utility that it accepts the project.

The project's administrative documents shall be closed out and funds terminated within one year of the last chargeable day of the projects. Exceptions will be approved if the Utilities Section is notified in writing of a pending invoice prior to last chargeable day.

10 DE Reg. 1730 (05/01/07) (Final)

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Appendix A
Utilities Manual Update Procedure

The *Utilities Manual* was developed to guide and assist Department personnel in the practices, policies, and procedures for installing, adjusting, and maintaining utility lines and appurtenances within the rights-of-way of Delaware's highways. Because utility design practices, policies, and procedures undergo changes through time, this manual must likewise undergo changes to retain its usefulness as a comprehensive, up-to-date technical reference. Manual updates may be required by changes in:

- design techniques and procedures,
- operating policies,
- geometric design standards, and
- organizational structure, responsibilities, and relationships.

To ensure orderly, logical, and timely updating of the manual, certain responsibilities must be designated and specific procedures must be followed. These responsibilities and procedures are set forth in this appendix.

RESPONSIBILITIES

The Assistant Director, Engineering Support shall have basic responsibility for the content of the *Utilities Manual* and for ensuring that it is maintained current. To help achieve these objectives, the Utilities Engineer will act as the Utilities Manual Coordinator.

As Utilities Manual Coordinator, the Utilities Engineer is charged with managing the updating of the manual. He/she coordinates the activities and chairs any meetings to discuss updates of the manual. The Utilities Engineer will work with the Design Support Engineer, the District Public Works Coordinators and other key Department employees and stakeholders who have specialized background and knowledge in particular fields related to road and bridge design, construction, maintenance, and materials; utilities operations; and traffic operations.

The Coordinator sees that the adopted changes are prepared in final format, checked for correctness and submitted to the Registrar of Regulations. After the publication and approval process the manual will be reproduced in sufficient quantities, and distributed to manual users and make it available on the Departments website. As part of this responsibility, he/she maintains an accurate, current distribution list of manual users to ensure that all copies are indeed updated. The Coordinator also maintains a current List of

Revisions, Figure E-2, so individual manual holders may check periodically to ensure that all revisions have been incorporated into their manuals. Revision numbers will consist of the year and the number of revisions for that year. For example, the first revision made in 2008 is referenced *Revision No. 2008-01*.

PROCEDURES FOR MAKING CHANGES

Drafts of proposed new or revised material should be submitted to the Assistant Director, Engineering Support for review and approval. In the case of particularly significant changes, the Assistant Director should consult with the Chief Engineer. Once changes are in final form, they should be submitted to FHWA for approval to be applied to Federal-Aid Projects.

Changes to the manual should be written (and illustrated) in the same style as the original text. Uniform language level and sentence style will preserve the uniformity of the presentation—and will be more understandable to the reader. Updated material should be clear and concise. The Coordinator should take the lead in ensuring this quality.

Computer software, word processors, and printers should be used to compose, format, store, and print the text of the manual. This greatly facilitates the updating procedure. Otherwise, updated pages must be retyped entirely. Then, retyped pages must be proofread carefully to verify not only that the changes are made correctly, but also that the unchanged text is not accidentally altered. New or modified illustrations should be given the same attention. The Manual Coordinator is responsible for verifying the accuracy of the revised sheets.

When new pages are created because the changes do not fit onto the existing number of pages, the insertions should be identified with letter suffixes after the page numbers. For example, two new pages between 4-14 and 4-15 become 4-14a and 4-14b. The same approach should be used for the figures. (A new figure added between *Figure 2-3* and *Figure 2-4* would be *Figure 2-3a*.)

Individual pages are not dated in the initial publication. However, when revisions are made to a page, or a new page is added, the revision date should be clearly shown at the bottom of the page. For example, *Revision 2007-01*. This will provide for easy distinction between new sheets and out-dated sheets.

Attention must be given to changes that require modification of titles and/or page numbers in the Table of Contents.

Users are encouraged to utilize the most recent Utilities Manual accessible at the Departments web site. The loose-leaf format of the *Utilities Manual* also makes updating a quick and simple task. Users should be encouraged to keep their copies up to date. The Coordinator should issue changes electronically.

It is essential that the Manual Coordinator maintain a current list of the names and email addresses of all individuals who have been issued copies of the *Utilities Manual* so that updated materials can be distributed to all users. Periodically, those who no longer are users of the manual should be deleted from the list.

When revised materials are distributed, the specific changes in the text and illustrations should be summarized in the letter of transmittal so that users will not have to search to identify them. The changes should also be highlighted on the pages by “redlining” the revised text.

Figure A-1

(Sample Form — Suggested Revision to the Utilities Manual)

State of Delaware Department of Transportation

Utilities Manual

Memo to: UTILITIES ENGINEER

Subject: Revision to the *Utilities Manual*

Date:

Suggested by:

Suggested Change:

Reason for the Change:

Back-up Source Data:

Figure A-2

(Sample Form — List of Revisions to the Utilities Manual)

State of Delaware Department of Transportation

Utilities Manual

LIST OF REVISIONS

<u>Revision Number</u>	<u>Date</u>	<u>Page</u>	<u>Brief Description</u>

Appendix B
Agreements

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CRITERIA FOR SELECTING THE PROPER LETTER AGREEMENT

Eight different letter agreements are used, depending on the type of project, reimbursement and the ownership of the utility. The samples in this appendix are identified at the bottom left corner of the front page of each form. For example, the first letter agreement is DeIDOT Form Control No. 86U-04-_. Either “a” or “b” is inserted in the blank to indicate the ownership of the utility and applicable legal provisions.

DeIDOT Form Control Number	Selection Criteria
	Projects 100% funded with State money (including dirt roads)
86U - 04 - a	Privately owned utilities - DP&L v. Terry, et. al., C.A. 1303, Seitz, C., September 19, 1963
86U - 04 - b	Publicly owned utilities - the provisions of Title 17, Delaware C. §143
	Projects with federal participation
86U - 05 - a	Privately owned utilities - DP&L v. Terry, et. al., C.A. 1303, Seitz, C., September 19, 1963
86U - 05 - b	Publicly owned utilities - the provisions of Title 17, Delaware C. §143
	Interstate projects with federal participation (90/10%)
86U - 05 - c	Either type of utility - the provisions of Title 17, Delaware C. §132, (b), (5)
	Utility design and construction work to be performed by the State's contractor and paid for by the State.
86U - 06 - a	Privately owned utilities - DP&L v. Terry, et. al., C.A. 1303, Seitz, C., September 19, 1963
86U - 06 - b	Publicly owned utilities - the provisions of Title 17, Delaware C. §143
86U - 07	Utility work involving City or County facilities.
86U - 36	Utility Projects funded up to 50% with State money under Special Circumstances with Secretary's approval. Copy of Agreement must be sent to Public Service Commission.
	Reimbursement of additional expenses caused by unique materials and advance work.
86U - 37 - e	Storage costs of unique utility materials and supplies more than 60 days prior to construction contract. The provisions of Title 17, Delaware C. §143 (e)
86U - 37 - f	Increased expenses due to work done in advance of highway construction. The provisions of Title 17, Delaware C. §143 (f)
	Reimbursement of additional expenses caused by a second move of utility facilities in the same project or cancellation. The provisions of Title 17, Delaware C. §143 (g)
86U - 38 - g - i	Second Alteration or relocation of same facility within ten (10) years.
86U - 38 - g - ii	Alteration in construction plan.
86U - 38 - g - iii	Department cancels project within two years of authorization.
86U - 38 - g - iv	Temporary alteration or relocation.
86U - 39 - h	Utility construction work performed by state contractor and reimbursed by the Utility. The provisions of Title 17, Delaware C. §143 (h)
86U - 39 - j	Reimbursement by State to utility should facility enhancement reduce costs, expedite project, or otherwise result in increased public benefit or convenience. The provisions of Title 17, Delaware C. §143 (j)

Control No. 86U – 04 - __

Name _____ Date _____
Title _____
Company _____
Address _____
Address 2 _____
City/State/Zip _____

**RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____**

Dear Mr. _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and _____, hereinafter designated as "**UTILITY**". The subject of this **AGREEMENT** as hereinafter set forth shall sometimes be referred to as the "**PROJECT**".

The Items of **AGREEMENT** include the following:

The **STATE**, in compliance with Form 86U-04-XXX (a or b), agrees to pay the expense of relocating and/or adjusting the **UTILITY's** facilities to conform to the new construction, including but not limited to right-of-way acquisition expenses, meaning thereby the cost to the **UTILITY** properly attributable to such relocation and/or adjustment after deducting therefrom any increase in the value of the new or adjusted facilities and any salvage value derived from the old facilities, and the **UTILITY** has agreed to accept such payments as full and fair compensation of the **UTILITY** occasioned by or resulting from the new construction.

The **STATE** shall prepare or cause to be prepared plans for the new construction which will affect the **UTILITY's** _____ facilities consisting of _____ and all related appurtenances. The **STATE** shall furnish the **UTILITY** with advance copies of plans showing the proposed new construction.

All plans, specifications and estimates of expense shall upon approval, if required, be incorporated into the **AGREEMENT** and become a part hereof.

The **UTILITY** shall prepare plans, specifications, and estimate of the expense for the relocation and/or adjustments of its _____ facilities, caused by new construction of the affected roadway and shall submit the same to the **STATE**, through the **Utilities Engineer** for the **STATE**'s review and approval. The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall obtain prior written approval from the **STATE**. The **STATE** will reimburse the **UTILITY** for the preparation of all documents required by this paragraph pursuant to **Form 86U-04-XXX (a or b)**.

All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

After acceptance of the **UTILITY**'s specifications, plans and estimates of expense, and upon orders from the **STATE**, the **UTILITY** shall proceed to perform the work covered by such specifications, plans and estimates. Such work shall be performed by the **UTILITY** with its own forces unless the **UTILITY** shall request that it be permitted to let a contract for the performance of said work and such request shall be submitted to **STATE** through the **Utilities Engineer** for the **STATE**'s review and approval. The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. The **STATE** will reimburse the **UTILITY** for the above said work pursuant **86U-04-XXX (a or b)**.

Protection as specified in **Delaware Manual on Uniform Traffic Control Devices for Street and Highway Construction and Maintenance Operations**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, shall be provided for by the **UTILITY**. The **STATE** will reimburse the **UTILITY** for the costs of the above required protection pursuant **86U-04-XXX (a or b)**.

The **UTILITY** shall cooperate with the **STATE**'s contractor in performance of its work so that the new construction will not be impeded and shall perform its work in accordance with the provisions of the **STATE**'s "**Standard Specifications**", and all amendments thereto, in effect as of the date of this **AGREEMENT**, which specifications and amendments are hereby incorporated herein by reference and made a part hereof.

The **UTILITY** agrees to carry sufficient insurance for the **PROJECT** and for its protection, that of the **STATE** and the public in such amounts as said **UTILITY** deems necessary. The **UTILITY** shall pay all costs of said insurance.

The **UTILITY** shall indemnify and save harmless the **STATE** of **Delaware**, and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons, or property on account of the work of the **UTILITY**, its officers, agents, employees, assigns, independent contractors or the like undertaken within the scope of this project and arising as a result of the **UTILITY's** negligence or willful misconduct.

The **Parties** hereto agree that in the event of the **UTILITY's** noncompliance with the provisions of this contract, the **STATE** may impose such contract sanctions as it may deem appropriate, including but not limited to withholding of payments until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either party to pursue any legal or equitable remedy available to it for a breach of contract.

Upon the completion of the relocation and/or adjustments, and written acceptance of the **STATE**, the **UTILITY** shall thereafter maintain said installation.

All work to be performed under this **AGREEMENT** shall conform with all applicable state and federal laws, rules and regulation, including all the requirements of **Title VI of the Civil Rights Act of 1964** and **Implementing Regulations** issued by the **Department of Transportation**, attached hereto as **Exhibit "A"**. **Utility** agrees that these provisions shall apply to it and/or any subcontractor(s).

If the **UTILITY** elects not to perform any portion of the relocation work under this **AGREEMENT** with its own forces but to enter into a contract or agreement with a contractor to perform the relocation work, the **UTILITY** covenants that it will not discriminate on the grounds of race, color, religion, sex, and national origin in the selection or retention of such contractor or similar person, and shall include in the contract or agreement with the contractor or similar person the provision as set forth in **Appendix A, Civil Rights Act of 1964**.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense for the relocation work performed. The final invoice should specify "final" and contain a summary of total project costs billed. In the case of betterment to the **UTILITY's** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment cost thereof. Upon expiration of the aforementioned time period, the project's administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **UTILITY** to proceed with its work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation.

The signature of the undersigned constitutes the **STATE's** consent and endorsement to the provisions of this letter agreement. An official signature of the representative for the _____ when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____
Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

**Director, Technology and
Support Services**

BY: _____
Assistant Director, Engineering Support

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"

Control No. 86U – 05 - __

Name

Date

Title

Company

Address

Address 2

City/State/Zip

RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER STATE CONTRACT NO. _____

F.A.P. NO. _____

LOCATION _____

COUNTY _____

Dear Mr. _____:

This letter constitutes an AGREEMENT between the Department of Transportation of the State of Delaware, hereinafter designated as "STATE", and _____, hereinafter designated as "UTILITY". The subject of this AGREEMENT, as hereinafter set forth, shall sometimes be referred to as the "PROJECT".

The items of AGREEMENT include the following:

The STATE, in compliance with Form 86U-05-XXX (a, b, or c), agrees to pay the expense of relocating and/or adjusting the UTILITY's facilities to conform to the new construction, including but not limited to right-of-way acquisition expenses, meaning thereby the cost to the UTILITY properly attributable to such relocation and/or adjustment after deducting therefrom any increase in the value of the new or adjusted facilities and any salvage value derived from the old facilities, and the UTILITY has agreed to accept such payments as full and fair compensation of the UTILITY occasioned by or resulting from the new construction.

The STATE shall prepare or cause to be prepared plans for the new construction which will affect the UTILITY's _____ facilities consisting of _____ and all related appurtenances. The STATE shall furnish the UTILITY with advance copies of plans showing the proposed new construction.

All plans, specifications and estimates of expense shall, upon approval, if required, be incorporated into the AGREEMENT and become a part hereof.

The UTILITY shall prepare plans, specifications, and estimates of the expense for the relocation and/or adjustments of its _____ facilities caused by new construction of the affected roadway and shall submit the same to the STATE, through the Utilities Engineer for the STATE's review and approval. The UTILITY shall not proceed with any work on the PROJECT except the foregoing unless it shall first obtain prior written approval from the STATE. The STATE will reimburse the UTILITY for the preparation of all documents required by this paragraph pursuant to Form 86U-05-XXX (a, b, or c).

DelDOT Form Control No. 86U-05-__

Page 1

All plans, specifications and estimates of expenses submitted by the **UTILITY** shall be prepared in accordance with, and shall be subject to, the conditions and stipulations set forth in **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and all amendments thereto, in effect as of the date of this **AGREEMENT**. All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

After acceptance of the **UTILITY's** specifications, plans and estimates of expense, and upon orders from the **STATE**, the **UTILITY** shall proceed to perform the work covered by such specifications, plans and estimates. Such work shall be performed by the **UTILITY** with its own forces unless the **UTILITY** shall request that it be permitted to let a contract for the performance of said work, in which case such request shall be submitted to the **STATE** through the **Utilities Engineer** for the **STATE's** review and approval.

The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. If such work is to be performed by contract, the **UTILITY** shall let the contract in accordance with the provisions of ***US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and the payments to be made by the **STATE** shall be subject to the conditions and limitations as set forth therein. The **STATE** will reimburse the **UTILITY** for the above said work pursuant to **Form 86U-05-XXX (a, b, or c)**.

Protection as specified in **Delaware Manual on Uniform Traffic Control Devices for Street and Highway Construction and Maintenance Operations**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, shall be provided for by the **UTILITY**. The **STATE** will reimburse the **UTILITY** for the costs of the above required protection pursuant to **Form 86U-05-XXX (a, b, or c)**.

The **UTILITY** shall cooperate with the **STATE's** contractor in performance of its work so that the new construction will not be impeded and shall perform its work in accordance with the provisions of the **STATE's "Standard Specifications"**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, which specifications and amendments are hereby incorporated herein by reference and made a part hereof.

The **UTILITY** agrees to carry sufficient insurance for the **PROJECT** and for its protection, that of the **STATE** and the public in such amounts as said **UTILITY** deems necessary. The **UTILITY** shall pay all costs of said insurance.

The **UTILITY** shall indemnify and save harmless the **STATE of Delaware** and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons or property on account of the work of the **UTILITY**, its officers, agents, employees, assigns, independent contractors, or the like undertaken within the scope of this project and arising as a result of the **UTILITY's** negligence or willful misconduct.

The **Parties** hereto agree that in the event of the **UTILITY's** noncompliance with the provisions of this contract, the **STATE** may impose such contract sanctions as it may deem appropriate, including but not limited to withholding of payments until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either party to pursue any legal or equitable remedy available to it for a breach of contract.

Upon completion of the relocation and/or adjustments, and written acceptance of the **STATE**, the **UTILITY** shall thereafter maintain said installation.

All work to be performed under this **AGREEMENT** shall conform with all applicable state and federal laws, rules and regulations, including all the requirements of **Title VI of the Civil Rights Act of 1964** and **Implementing Regulations** issued by the **Department of Transportation**, attached hereto as **Exhibit "A"**. The **UTILITY** agrees that these provisions shall apply to it and/or any subcontractor(s).

If the **UTILITY** elects not to perform any portion of the relocation work under this **AGREEMENT** with its own forces but to enter into a contract or agreement with a contractor to perform the relocation work, the **UTILITY** covenants that it will not discriminate on the grounds of race, color, religion, sex, and national origin in the selection or retention of such contractor or similar person, and shall include in the contract or agreement with the contractor or similar person the provision as set forth in **Appendix A, Civil Rights Act of 1964**.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense for the relocation work performed. The billing shall conform to the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**. The final invoice should specify "final" and contain a summary of total project costs performed. In the case of betterment to the **UTILITY's** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment cost thereof. Upon expiration of the aforementioned time period, the project's administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **UTILITY** to proceed with its work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation.

The signature of the undersigned constitutes the **STATE's** consent to and endorsement of the provisions of this letter agreement. An official signature of the representative for _____, when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____
Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

**Director, Technology and
Support Services**

BY: _____
Assistant Director, Engineering Support

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"

Control No. 86U – 06 - __

Name _____ Date _____
Title _____
Company _____
Address _____
Address 2 _____
City/State/Zip _____

**RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____**

Dear _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and the _____ hereinafter designated as "**UTILITY**". The subject of this **AGREEMENT** as hereinafter set forth shall sometimes be referred to as the "**PROJECT**".

The items of **AGREEMENT** include the following:

The **STATE**, in compliance with Form 86U-06-XXX (a or b), agrees to pay the expense of relocating and/or adjusting the **UTILITY's** facilities to conform to the new construction. The existing _____ facilities located in the area of proposed construction will have to be altered due to the construction.

The **STATE** shall prepare or cause to be prepared plans for the new construction which will affect the **UTILITY's** _____ facilities consisting of _____ and all related appurtenances. The **STATE** shall furnish the **UTILITY** with advance copies of plans showing the proposed new construction.

It is our understanding that it is the desire of the **UTILITY** to prepare the design, or that the **STATE** prepare all necessary design for the _____ system to be adjusted and/or relocated as required, by the **STATE's** highway contractor during road construction at the **STATE's** expense. Adjustments and/or relocations shall be shown on the new construction plans.

All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

It is also understood that the **UTILITY** shall have the right to review and approve plans and specifications and provide inspection for the construction of the _____ facilities. The **STATE** will reimburse the **UTILITY** for the above said inspection work pursuant to **Form 86U-06-XXX (a or b)**.

Any adjustments and/or relocations to the **UTILITY's** facilities shall be done by the **STATE's** contractor in accordance with the **UTILITY's "Standard Specifications"**.

Upon completion of the adjustment and/or relocation and acceptance of the work by the **UTILITY**, the **STATE** shall be relieved of all the responsibilities for maintenance of the _____ facility.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense of preliminary engineering and inspection referred to above. The final invoice should specify "final" and contain a summary of total project costs billed. In the case of betterment to the **UTILITY's** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment costs thereof. Upon expiration of the aforementioned time period, the project's administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **STATE's** contractor to proceed with the work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation pursuant to **Form 86U-06-XXX (a or b)**.

The signature of the undersigned constitutes the **STATE's** consent and endorsement to the provisions of this letter agreement. An official signature of the representative for the _____ when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____
Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

**Director, Technology and
Support Services**

BY: _____
Assistant Director, Engineering Support

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"

Control No. 86U – 07 - __

Name

Date

Title

Company

Address

Address 2

City/State/Zip

RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____

Dear _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and the **New Castle County Department of Public Works**, hereinafter designated as "**COUNTY**". The subject of this **AGREEMENT** as hereinafter set forth shall sometimes be referred to as the "**PROJECT**".

The item of **AGREEMENT** include the following:

1. The **STATE** in compliance with Title 17 Del. C. §143 agrees to pay the expense of relocating and/or adjusting the **COUNTY's** facilities to conform to the **STATE's** new construction. The existing _____ system located in the area of proposed construction will have to be altered due to the construction.
2. The **STATE** shall prepare or cause to be prepared plans for the new construction which will affect the **COUNTY's** _____ facilities, consisting of _____ and all related appurtenances within the context of Title 17 Del. C. §143. The **STATE** shall furnish the **COUNTY** with advance copies of plans showing the proposed new construction.
3. It is agreed that it is the desire of the **COUNTY** that the **STATE** prepare all necessary design for the _____ system to be adjusted and/or relocated as required, by the **STATE's** highway contractor during road construction at the **STATE's** expense. Adjustments and/or relocations shall be shown on the new construction plans.
4. All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and expired service life as agreed to by the **COUNTY**.
5. It is also understood that the **COUNTY** shall have the right to review and approve plans and specifications and provide inspection for the construction of the _____ facilities.

DelDOT Form Control No. 86U-07

Page 1

6. Any adjustments and/or relocations to the **COUNTY's** facilities shall be done by the **STATE's** contractor in accordance with the **COUNTY's** "Standard Specifications" and any amendments adopted by the **COUNTY** and communicated to the **STATE** within ten (10) days prior to letting of the **STATE** contract.
7. Upon completion of the adjustments and/or relocations and acceptance of the work by the **COUNTY**, the **STATE** shall be relieved of all the responsibilities for maintenance of the _____ facilities.
8. Upon completion of the relocations and/or adjustments, the **COUNTY** shall submit to the **STATE** a single and final bill, in detail and based on work order accounting, for the expense of engineering inspection referred to in item five (5) above which shall be paid within thirty (30) days after receipt. The final invoice should specify "final" and contain a summary of total project costs billed. In the case of betterment to the **COUNTY's** system, for which prior written approval from the **COUNTY** has been obtained, the **STATE** shall submit to the **COUNTY** a single and final bill for the costs thereof which shall be paid within thirty (30) days after receipt. The project's administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.
9. The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.
10. The **STATE** may cancel this **AGREEMENT** by written notification to the **COUNTY**, at anytime prior to notification to the **STATE's** contractor of proceed with the work, in which event the **STATE** shall compensate the **COUNTY** for the expense incurred by it as of the date of notification of cancellation.
11. Any dispute, disagreement or misunderstanding concerning the intent, purpose or interpretation with any provision of this **AGREEMENT**, and/or any failure to agree or approve any item requiring agreement or approval and/or any matter concerning any aspect of this **AGREEMENT** shall be submitted to the Chief Engineer for review and decision. Any finding made by the Chief Engineer shall be final and binding on both parties.

- 12. The signature of the undersigned constitutes the **STATE's** consent and endorsement to the provisions of this letter agreement. An official signature of the representative of **the New Castle County Department of Public Works** when affixed hereinafter shall constitute your agreement to the terms and conditions contained herein.

**NEW CASTLE COUNTY
DEPARTMENT OF PUBLIC WORKS**

Witness

BY: _____
Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

**Director, Technology and
Support Services**

BY: _____
Assistant Director, Engineering Support

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"

Control No. 86U – 36 - __

Name _____ Date _____
Title _____
Company _____
Address _____
Address 2 _____
City/State/Zip _____

**RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____**

Dear Mr. _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and _____, hereinafter designated as "**UTILITY**". The subject of this **AGREEMENT**, as hereinafter set forth, shall sometimes be referred to as the "**PROJECT**".

Pursuant to authority granted in 17 Del. C. §143 (i) as in effect after June 29, 2004,

The Department may enter into an agreement with a non-municipal or other non-governmental public utility to reimburse it for up to fifty percent (50%) of the cost of the public utility facility's alteration or relocation as part of a highway construction, reconstruction, relocation, repair or maintenance project if:

- 1) The existing public utility facility is located within a highway or public right-of-way by grant of franchise; and
- 2) The alteration or relocation is necessitated by special circumstances, including, but not limited to:
 - i) a major economic development project in which the public utility's cooperation is critical to accomplishing the project in a timely manner;
 - ii) recovery from natural disasters such as storms or floods; or
 - iii) compelling benefit to the traveling public.

The determination of whether special circumstances exist under subsection (2) above vests solely with the Secretary. The Secretary shall make written findings detailing the nature of the special circumstances and the costs and benefits to the State in altering or relocating a public utility facility. The determination of the Secretary is a public record. The Secretary shall forward a copy of the determination to the Public Service Commission for filing with the public records of the Commission.

Accordingly, the **STATE** agrees to use this authority in connection with State Contact No. _____ as detailed below:

The **STATE** shall prepare or cause to be prepared plans for the new construction which will affect the **UTILITY's** _____ facilities consisting of _____ and all related appurtenances. The **STATE** shall furnish the **UTILITY** with advance copies of plans showing the proposed new construction.

All plans, specifications and estimates of expense shall, upon approval, if required, be incorporated into the **AGREEMENT** and become a part hereof.

The **UTILITY** shall prepare plans, specifications, and estimates of the expense for the relocation and/or adjustments of its _____ facilities caused by new construction of the affected roadway and shall submit the same to the **STATE**, through the **Utilities Engineer** for the **STATE's** review and approval. The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. The **STATE** will reimburse the **UTILITY** for the preparation of all documents required by this paragraph.

All plans, specifications and estimates of expenses submitted by the **UTILITY** shall be prepared in accordance with, and shall be subject to, the conditions and stipulations set forth in **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and all amendments thereto, in effect as of the date of this **AGREEMENT**. All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

After acceptance of the **UTILITY's** specifications, plans and estimates of expense, and upon orders from the **STATE**, the **UTILITY** shall proceed to perform the work covered by such specifications, plans and estimates. Such work shall be performed by the **UTILITY** with its own forces unless the **UTILITY** shall request that it be permitted to let a contract for the performance of said work, in which case such request shall be submitted to the **STATE** through the **Utilities Engineer** for the **STATE's** review and approval.

The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. If such work is to be performed by contract, the **UTILITY** shall let the contract in accordance with the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and the payments to be made by the **STATE** shall be subject to the conditions and limitations as set forth therein. The **STATE** will reimburse the **UTILITY** for the above said work.

Protection as specified in **Delaware Manual on Uniform Traffic Control Devices for Street and Highway Construction and Maintenance Operations**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, shall be provided for by the **UTILITY**. The **STATE** will reimburse the **UTILITY** for the costs of the above required protection.

The **UTILITY** shall cooperate with the **STATE's** contractor in performance of its work so that the new construction will not be impeded and shall perform its work in accordance with the provisions of the **STATE's "Standard Specifications"**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, which specifications and amendments are hereby incorporated herein by reference and made a part hereof.

The **UTILITY** agrees to carry sufficient insurance for the **PROJECT** and for its protection, that of the **STATE** and the public in such amounts as said **UTILITY** deems necessary. The **UTILITY** shall pay all costs of said insurance.

The **UTILITY** shall indemnify and save harmless the **STATE of Delaware** and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons or property on account of the work of the **UTILITY**, its officers, agents, employees, assigns, independent contractors, or the like undertaken within the scope of this project and arising as a result of the **UTILITY's** negligence or willful misconduct.

The **Parties** hereto agree that in the event of the **UTILITY's** noncompliance with the provisions of this contract, the **STATE** may impose such contract sanctions as it may deem appropriate, including but not limited to withholding of payments until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either party to pursue any legal or equitable remedy available to it for a breach of contract.

Upon completion of the relocation and/or adjustments, and written acceptance of the **STATE**, the **UTILITY** shall thereafter maintain said installation.

All work to be performed under this **AGREEMENT** shall conform with all applicable state and federal laws, rules and regulations, including all the requirements of **Title VI of the Civil Rights Act of 1964** and **Implementing Regulations** issued by the **Department of Transportation**, attached hereto as **Exhibit "A"**. The **UTILITY** agrees that these provisions shall apply to it and/or any subcontractor(s).

If the **UTILITY** elects not to perform any portion of the relocation work under this **AGREEMENT** with its own forces but to enter into a contract or agreement with a contractor to perform the relocation work, the **UTILITY** covenants that it will not discriminate on the grounds of race, color, religion, sex, and national origin in the selection or retention of such contractor or similar person, and shall include in the contract or agreement with the contractor or similar person the provision as set forth in **Appendix A, Civil Rights Act of 1964**.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense for the relocation work performed. The billing shall conform to the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**. The final invoice should specify “final” and contain a summary of total project costs performed. In the case of betterment to the **UTILITY’s** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment cost thereof. Upon expiration of the aforementioned time period, the project’s administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **UTILITY** to proceed with its work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation.

The signature of the undersigned constitutes the **STATE's** consent to and endorsement of the provisions of this letter agreement. An official signature of the representative for _____, when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____
Title

ATTEST:

APPROVED FOR THE
DEPARTMENT OF TRANSPORTATION

Director, Technology and

BY: _____
Secretary

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"

Control No. 86U – 37 - __

Name _____ Date _____
Title _____
Company _____
Address _____
Address 2 _____
City/State/Zip _____

**RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____**

Dear Mr. _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and _____, hereinafter designated as "**UTILITY**". The subject of this **AGREEMENT**, as hereinafter set forth, shall sometimes be referred to as the "**PROJECT**".

The provisions of 17 Del. C. §143 (e) & (f), as in effect after June 29, 2004, include the following:

- e) If construction specifications for the alternation or relocation of a non-municipal or other non-governmental public utility facility, authorized by the Department as part of a highway construction, reconstruction, relocation, repair, or maintenance project, require the use of unique materials or supplies, the Department may enter into an agreement with the public utility for the use of the unique materials or supplies in advance of the construction contract. If the public utility is required to store the unique materials or supplies for more than sixty (60) days prior to their incorporation into the construction work, the Department shall enter into an agreement with the public utility to reimburse the public utility for all or a portion of the actual cost incurred for the storage of the unique materials or supplies.
- f) If the Department determines that it is beneficial to enter into an agreement with a non-municipal or other non-governmental public utility for the alteration or relocation of its facilities in advance of the commencement of a highway construction, reconstruction, relocation, repair, or maintenance project, the agreement may include provisions for the Department to reimburse the public utility for increased expenses incurred as a result of the advanced move, including, but not limited to, expenses for the maintenance of traffic, tree and vegetation removal, grubbing, grading, test holes, and surveying.

The STATE therefore agrees to enter into such agreement relating to the above capital State Contract No. _____, as detailed below:

The STATE shall prepare or cause to be prepared plans for the new construction which will affect the UTILITY's _____ facilities consisting of _____ and all related appurtenances. The STATE shall furnish the UTILITY with advance copies of plans showing the proposed new construction.

All plans, specifications and estimates of expense shall, upon approval, if required, be incorporated into the AGREEMENT and become a part hereof.

The UTILITY shall prepare plans, specifications, and estimates of the expense for the relocation and/or adjustments of its _____ facilities caused by new construction of the affected roadway and shall submit the same to the STATE, through the Utilities Engineer for the STATE's review and approval. The UTILITY shall not proceed with any work on the PROJECT except the foregoing unless it shall first obtain prior written approval from the STATE. The STATE will reimburse the UTILITY for the preparation of all documents required by this paragraph.

All plans, specifications and estimates of expenses submitted by the UTILITY shall be prepared in accordance with, and shall be subject to, the conditions and stipulations set forth in US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction, and all amendments thereto, in effect as of the date of this AGREEMENT. All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

After acceptance of the UTILITY's specifications, plans and estimates of expense, and upon orders from the STATE, the UTILITY shall proceed to perform the work covered by such specifications, plans and estimates. Such work shall be performed by the UTILITY with its own forces unless the UTILITY shall request that it be permitted to let a contract for the performance of said work, in which case such request shall be submitted to the STATE through the Utilities Engineer for the STATE's review and approval.

The UTILITY shall not proceed with any work on the PROJECT except the foregoing unless it shall first obtain prior written approval from the STATE. If such work is to be performed by contract, the UTILITY shall let the contract in accordance with the provisions of US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction, and the payments to be made by the STATE shall be subject to the conditions and limitations as set forth therein. The STATE will reimburse the UTILITY for the above said work.

Protection as specified in **Delaware Manual on Uniform Traffic Control Devices for Street and Highway Construction and Maintenance Operations**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, shall be provided for by the **UTILITY**. The **STATE** will reimburse the **UTILITY** for the costs of the above required protection.

The **UTILITY** shall cooperate with the **STATE's** contractor in performance of its work so that the new construction will not be impeded and shall perform its work in accordance with the provisions of the **STATE's "Standard Specifications"**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, which specifications and amendments are hereby incorporated herein by reference and made a part hereof.

The **UTILITY** agrees to carry sufficient insurance for the **PROJECT** and for its protection, that of the **STATE** and the public in such amounts as said **UTILITY** deems necessary. The **UTILITY** shall pay all costs of said insurance.

The **UTILITY** shall indemnify and save harmless the **STATE of Delaware** and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons or property on account of the work of the **UTILITY**, its officers, agents, employees, assigns, independent contractors, or the like undertaken within the scope of this project and arising as a result of the **UTILITY's** negligence or willful misconduct.

The **Parties** hereto agree that in the event of the **UTILITY's** noncompliance with the provisions of this contract, the **STATE** may impose such contract sanctions as it may deem appropriate, including but not limited to withholding of payments until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either party to pursue any legal or equitable remedy available to it for a breach of contract.

Upon completion of the relocation and/or adjustments, and written acceptance of the **STATE**, the **UTILITY** shall thereafter maintain said installation.

All work to be performed under this **AGREEMENT** shall conform with all applicable state and federal laws, rules and regulations, including all the requirements of **Title VI of the Civil Rights Act of 1964** and **Implementing Regulations** issued by the **Department of Transportation**, attached hereto as **Exhibit "A"**. The **UTILITY** agrees that these provisions shall apply to it and/or any subcontractor(s).

If the **UTILITY** elects not to perform any portion of the relocation work under this **AGREEMENT** with its own forces but to enter into a contract or agreement with a contractor to perform the relocation work, the **UTILITY** covenants that it will not discriminate on the grounds of race, color, religion, sex, and national origin in the selection or retention of such contractor or similar person, and shall include in the contract or agreement with the contractor or similar person the provision as set forth in **Appendix A, Civil Rights Act of 1964**.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense for the relocation work performed. The billing shall conform to the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**. The final invoice should specify "final" and contain a summary of total project costs performed. In the case of betterment to the **UTILITY's** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment cost thereof. Upon expiration of the aforementioned time period, the project's administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **UTILITY** to proceed with its work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation.

The signature of the undersigned constitutes the **STATE's** consent to and endorsement of the provisions of this letter agreement. An official signature of the representative for _____, when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____
Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

**Director, Technology and
Support Services**

Assistant Director, Engineering Support

BY: _____

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"
DelDOT Form Control No. 86U-37-__

Control No. 86U – 38 - __

Name _____ Date _____
Title _____
Company _____
Address _____
Address 2 _____
City/State/Zip _____

**RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____**

Dear Mr. _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and _____, hereinafter designated as "**UTILITY**". The subject of this **AGREEMENT**, as hereinafter set forth, shall sometimes be referred to as the "**PROJECT**".

The provisions of 17 Del. C. §143 (g), as in effect after June 29, 2004 include the following:

- (g) (1) The Department shall reimburse a non-municipal or other non-governmental public utility for the cost of altering or relocating its facility due to a highway construction, reconstruction, relocation, repair, or maintenance project under each of the following circumstances:
 - i) the Department requires a second alteration or relocation of the same public utility facility within ten (10) years from the date of completion of the initial alteration or relocation;
 - ii) the Department alters its plan of construction for the project at any time before its completion, in a manner that requires the public utility to alter or relocate its facility that has already been fully or partially altered or relocated in connection with the project;
 - iii) the Department cancels or does not commence a highway construction, reconstruction, relocation, repair, or maintenance project within a period of two (2) years from the date of authorization;
 - iv) the Department requests a temporary alteration or relocation of the public utility facility.

DelDOT Form Control No. 86U-38-__

Page 1

(2) The amount of reimbursement to be paid to a public utility under this subsection is the entire cost of alteration or relocation minus any increase in the value of the altered or new facility and any salvage value derived from the old facility.

Accordingly, the **STATE** agrees to use this authority in connection of State Contract No. _____, as detailed below:

The **STATE** shall prepare or cause to be prepared plans for the new construction which will affect the **UTILITY's** _____ facilities consisting of _____ and all related appurtenances. The **STATE** shall furnish the **UTILITY** with advance copies of plans showing the proposed new construction.

All plans, specifications and estimates of expense shall, upon approval, if required, be incorporated into the **AGREEMENT** and become a part hereof.

The **UTILITY** shall prepare plans, specifications, and estimates of the expense for the relocation and/or adjustments of its _____ facilities caused by new construction of the affected roadway and shall submit the same to the **STATE**, through the **Utilities Engineer** for the **STATE's** review and approval. The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. The **STATE** will reimburse the **UTILITY** for the preparation of all documents required by this paragraph.

All plans, specifications and estimates of expenses submitted by the **UTILITY** shall be prepared in accordance with, and shall be subject to, the conditions and stipulations set forth in **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and all amendments thereto, in effect as of the date of this **AGREEMENT**. All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

After acceptance of the **UTILITY's** specifications, plans and estimates of expense, and upon orders from the **STATE**, the **UTILITY** shall proceed to perform the work covered by such specifications, plans and estimates. Such work shall be performed by the **UTILITY** with its own forces unless the **UTILITY** shall request that it be permitted to let a contract for the performance of said work, in which case such request shall be submitted to the **STATE** through the **Utilities Engineer** for the **STATE's** review and approval.

The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. If such work is to be performed by contract, the **UTILITY** shall let the contract in accordance with the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and the payments to be made by the **STATE** shall be subject to the conditions and limitations as set forth therein. The **STATE** will reimburse the **UTILITY** for the above said work.

Protection as specified in **Delaware Manual on Uniform Traffic Control Devices for Street and Highway Construction and Maintenance Operations**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, shall be provided for by the **UTILITY**. The **STATE** will reimburse the **UTILITY** for the costs of the above required protection.

The **UTILITY** shall cooperate with the **STATE's** contractor in performance of its work so that the new construction will not be impeded and shall perform its work in accordance with the provisions of the **STATE's "Standard Specifications"**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, which specifications and amendments are hereby incorporated herein by reference and made a part hereof.

The **UTILITY** agrees to carry sufficient insurance for the **PROJECT** and for its protection, that of the **STATE** and the public in such amounts as said **UTILITY** deems necessary. The **UTILITY** shall pay all costs of said insurance.

The **UTILITY** shall indemnify and save harmless the **STATE of Delaware** and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons or property on account of the work of the **UTILITY**, its officers, agents, employees, assigns, independent contractors, or the like undertaken within the scope of this project and arising as a result of the **UTILITY's** negligence or willful misconduct.

The **Parties** hereto agree that in the event of the **UTILITY's** noncompliance with the provisions of this contract, the **STATE** may impose such contract sanctions as it may deem appropriate, including but not limited to withholding of payments until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either party to pursue any legal or equitable remedy available to it for a breach of contract.

Upon completion of the relocation and/or adjustments, and written acceptance of the **STATE**, the **UTILITY** shall thereafter maintain said installation.

All work to be performed under this **AGREEMENT** shall conform with all applicable state and federal laws, rules and regulations, including all the requirements of **Title VI of the Civil Rights Act of 1964** and **Implementing Regulations** issued by the **Department of Transportation**, attached hereto as **Exhibit "A"**. The **UTILITY** agrees that these provisions shall apply to it and/or any subcontractor(s).

If the **UTILITY** elects not to perform any portion of the relocation work under this **AGREEMENT** with its own forces but to enter into a contract or agreement with a contractor to perform the relocation work, the **UTILITY** covenants that it will not discriminate on the grounds of race, color, religion, sex, and national origin in the selection or retention of such contractor or similar person, and shall include in the contract or agreement with the contractor or similar person the provision as set forth in **Appendix A, Civil Rights Act of 1964**.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense for the relocation work performed. The billing shall conform to the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**. The final invoice should specify "final" and contain a summary of total project costs performed. In the case of betterment to the **UTILITY's** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment cost thereof. Upon expiration of the aforementioned time period, the project's administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **UTILITY** to proceed with its work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation.

The signature of the undersigned constitutes the **STATE's** consent to and endorsement of the provisions of this letter agreement. An official signature of the representative for _____, when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____
Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

**Director, Technology and
Support Services**

BY: _____
Assistant Director, Engineering Support

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit "A"

Control No. 86U – 39 - __

Name _____ Date _____
Title _____
Company _____
Address _____
Address 2 _____
City/State/Zip _____

**RE: LETTER AGREEMENT, RELOCATION AND ADJUSTMENT UNDER
STATE CONTRACT NO. _____
F.A.P. NO. _____
LOCATION _____
COUNTY _____**

Dear Mr. _____:

This letter constitutes an **AGREEMENT** between the **Department of Transportation of the State of Delaware**, hereinafter designated as "**STATE**", and _____, hereinafter designated as "**UTILITY**". The subject of this **AGREEMENT**, as hereinafter set forth, shall sometimes be referred to as the "**PROJECT**".

The provisions of 17 Del. C. §143 (h) & (j) as in effect after June 29, 2004, include the following:

h. The Department and a non-municipal or other non-governmental public utility may agree to include in a construction contract between the Department and the Department's contractor or subcontractor a provision to identify specific facility alteration or relocation construction items which will be performed by the Department's contractor or subcontractor instead of by the public utility. The construction items may include, but are not limited to, adjusting manholes and installing conduits, valve boxes, and concrete pads. As part of the agreement, the public utility must agree to reimburse the Department or the Department's contractor or subcontractor for the construction items.

j. The Department may enter into an agreement with a non-municipal or other non-governmental public utility regarding the alteration or relocation of the public utility's facilities to reimburse the public utility for the public utility's additional expenses incurred due to the enhancement of the public utility's facilities or of its equipment design, location, placement, or specification, if, in the judgment of the Department, the enhancement will result in net cost savings to the Department, will expedite the project, or will otherwise result in increased public benefit and convenience.

Accordingly, the **STATE** agrees to use this authority in connection with State Contract No. _____ as detailed below:

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The **STATE** shall prepare or cause to be prepared plans for the new construction which will affect the **UTILITY's** _____ facilities consisting of _____ and all related appurtenances. The **STATE** shall furnish the **UTILITY** with advance copies of plans showing the proposed new construction.

All plans, specifications and estimates of expense shall, upon approval, if required, be incorporated into the **AGREEMENT** and become a part hereof.

The **UTILITY** shall prepare plans, specifications, and estimates of the expense for the relocation and/or adjustments of its _____ facilities caused by new construction of the affected roadway and shall submit the same to the **STATE**, through the **Utilities Engineer** for the **STATE's** review and approval. The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. The **STATE** will reimburse the **UTILITY** for the preparation of all documents required by this paragraph.

All plans, specifications and estimates of expenses submitted by the **UTILITY** shall be prepared in accordance with, and shall be subject to, the conditions and stipulations set forth in **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and all amendments thereto, in effect as of the date of this **AGREEMENT**. All plans shall show clearly the existing facilities as well as the work contemplated. All estimates of expense for the work shall set forth the items of work to be performed in sufficient detail to provide a reasonable basis for analysis and shall indicate all credits for the value of salvage, betterment and, if applicable, expired service life.

After acceptance of the **UTILITY's** specifications, plans and estimates of expense, and upon orders from the **STATE**, the **UTILITY** shall proceed to perform the work covered by such specifications, plans and estimates. Such work shall be performed by the **UTILITY** with its own forces unless the **UTILITY** shall request that it be permitted to let a contract for the performance of said work, in which case such request shall be submitted to the **STATE** through the **Utilities Engineer** for the **STATE's** review and approval.

The **UTILITY** shall not proceed with any work on the **PROJECT** except the foregoing unless it shall first obtain prior written approval from the **STATE**. If such work is to be performed by contract, the **UTILITY** shall let the contract in accordance with the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**, and the payments to be made by the **STATE** shall be subject to the conditions and limitations as set forth therein. The **STATE** will reimburse the **UTILITY** for the above said work.

Protection as specified in **Delaware Manual on Uniform Traffic Control Devices for Street and Highway Construction and Maintenance Operations**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, shall be provided for by the **UTILITY**. The **STATE** will reimburse the **UTILITY** for the costs of the above required protection.

The **UTILITY** shall cooperate with the **STATE's** contractor in performance of its work so that the new construction will not be impeded and shall perform its work in accordance with the provisions of the **STATE's "Standard Specifications"**, and all amendments thereto, in effect as of the date of this **AGREEMENT**, which specifications and amendments are hereby incorporated herein by reference and made a part hereof.

The **UTILITY** agrees to carry sufficient insurance for the **PROJECT** and for its protection, that of the **STATE** and the public in such amounts as said **UTILITY** deems necessary. The **UTILITY** shall pay all costs of said insurance.

The **UTILITY** shall indemnify and save harmless the **STATE of Delaware** and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons or property on account of the work of the **UTILITY**, its officers, agents, employees, assigns, independent contractors, or the like undertaken within the scope of this project and arising as a result of the **UTILITY's** negligence or willful misconduct.

The **Parties** hereto agree that in the event of the **UTILITY's** noncompliance with the provisions of this contract, the **STATE** may impose such contract sanctions as it may deem appropriate, including but not limited to withholding of payments until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either party to pursue any legal or equitable remedy available to it for a breach of contract.

Upon completion of the relocation and/or adjustments, and written acceptance of the **STATE**, the **UTILITY** shall thereafter maintain said installation.

All work to be performed under this **AGREEMENT** shall conform with all applicable state and federal laws, rules and regulations, including all the requirements of **Title VI of the Civil Rights Act of 1964** and **Implementing Regulations** issued by the **Department of Transportation**, attached hereto as **Exhibit "A"**. The **UTILITY** agrees that these provisions shall apply to it and/or any subcontractor(s).

If the **UTILITY** elects not to perform any portion of the relocation work under this **AGREEMENT** with its own forces but to enter into a contract or agreement with a contractor to perform the relocation work, the **UTILITY** covenants that it will not discriminate on the grounds of race, color, religion, sex, and national origin in the selection or retention of such contractor or similar person, and shall include in the contract or agreement with the contractor or similar person the provision as set forth in **Appendix A, Civil Rights Act of 1964**.

Within six (6) months from the last chargeable day of the project, the **UTILITY** shall submit to the **STATE** a final bill in detail and based on work order accounting, for the expense for the relocation work performed. The billing shall conform to the provisions of **US DOT, Federal Highway Administration, Federal-Aid Policy Guide (FAPG), 23 CFR, Part 645, Section 645.115 Construction**. The final invoice should specify "final" and contain a summary of total project costs performed. In the case of betterment to the **UTILITY's** system, the **STATE** shall submit to the **UTILITY** a single and final bill for the betterment cost thereof. Upon expiration

of the aforementioned time period, the project’s administrative documents shall be closed out and funds terminated within one (1) year of the last chargeable day of the project.

The **UTILITY** must retain all books, documents, papers, accounting records and any other material pertaining to cost incurred under this agreement for a minimum of three (3) years after final payment by the **STATE** and shall make such material available upon request for inspection and audit by the **STATE**.

The **STATE** may cancel this **AGREEMENT** by written notification to the **UTILITY**, at anytime prior to notification to the **UTILITY** to proceed with its work, in which event the **STATE** shall compensate the **UTILITY** for the expense incurred by it as of the date of notification of cancellation.

The signature of the undersigned constitutes the **STATE**’s consent to and endorsement of the provisions of this letter agreement. An official signature of the representative for _____, when affixed hereinafter, shall constitute your agreement to the terms and conditions contained herein.

ATTEST:

APPROVED FOR THE

Secretary

BY: _____

Title

ATTEST:

**APPROVED FOR THE
DIVISION OF TRANSPORTATION SOLUTIONS**

BY: _____

**Director, Technology and
Support Services**

Assistant Director, Engineering Support

APPROVED AS TO FORM

Deputy Attorney General

Attached: Exhibit “A”

STATE OF DELAWARE

DIVISION OF MAINTENANCE AND OPERATIONS
UTILITY CONSTRUCTION PERMIT

DISTRICT _____ UTILITY _____ AREA _____
PERMIT NO. _____ PERMIT NO. _____ NO. _____ DATE _____
ISSUED TO _____

DESCRIPTION OF INSTALLATION *

It is hereby agreed by both parties involved in the granting of this permit that the actual construction or adjustment covered by this permit shall be performed in accordance with the policies and procedures set forth in the Utilities Policies and Procedures Manual, State of Delaware, Division of Maintenance and Operations, in effect on the date of this permit. Work is to begin within 30 days from the date of this permit and completed with as little delay as possible; the right to work under this permit expires 6 months from the date of issuance; it may be renewed or extended upon application.

The holder of this permit shall indemnify and save harmless the Division of Maintenance and Operations of and from all suits and damages arising from, or on account of the construction or operation of its said poles, wire, pipe, conduits, appurtenances, etc., herein permitted on State rights-of-way.

Permittee shall call the Division of Maintenance and Operations Permit Section, (Canal District: 326-4679, Central District: 760-2444, South District: 853-1341) 24 hours prior to any installation on State rights-of-way.

Traffic control shall be in accordance with the Division of Maintenance and Operations, Traffic Controls for Streets and Highway Construction Manual.

*Authorized Representative of Division of
Maintenance and Operations*

Authorized Representative of the Permittee

* * The description for the installation will include, if applicable, the intended usage or rating, pipe size, cable size and type, maximum pressure at which the pipeline will be operated, size and type of metal casing, and minimum depth of cable or pipeline.

STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION
PUBLIC UTILITY ANNUAL MASTER FRANCHISE

The _____ (**UTILITY**) a privately owned Delaware public utility, its successors, lessees, and assigns, is hereby granted the right, permission and authority to erect, construct, renew, replace, maintain and operate _____ Utility Facilities, together with the necessary fixtures and appurtenances within State's rights of way located in _____ County, Delaware under and subject to all conditions, restrictions, and regulations of the Department of Transportation (**DEPARTMENT**), State of Delaware (**STATE**). The effective date of this Master Franchise shall be the date of execution by the Director of Technology and Support Services and it shall remain in force for a period of fifty (50) years. This Master Franchise shall automatically renew annually for another fifty (50) years unless otherwise agreed to by the parties.

Under and by virtue of the power and authority vested in the **DEPARTMENT** by the provisions of the **Delaware Code, Title 17, Chapter 132, Subsection (c) (8)** and supplements thereto, the **DEPARTMENT** orders and directs that the following conditions, restrictions and regulations shall govern the installation of all utility facilities on the **STATE'S** rights of way.

1. The granting of this Master Franchise shall in no way operate as an exemption of the holder thereof from any taxes levied or to be levied in accordance with law by the governing body of this **STATE**, _____ County or any other regulatory authority.
2. The **UTILITY** shall indemnify and save harmless the **STATE** and its agencies, its officers, agents, employees, assigns, servants and the like from all suits, actions or claims of any character, whatsoever, brought because of any injuries or damage received or sustained by any persons, or property on account of the construction or operation of its said Utility Facilities and fixtures by the **UTILITY**, its officers, agents, employees, assigns, independent contractors or the like undertaken within the scope of the permitted work area and arising as a result of the **UTILITY'S** negligence or willful misconduct.
3. The **UTILITY** shall perform all construction adjustment or relocation in accordance with the policies and procedures as set forth in the *Utility Manual* of the **DEPARTMENT**, as amended from time to time.
4. The **UTILITY** shall, before cutting, spraying or trimming of any tree or shrub within the right of way of any highway in the **STATE**, secure a special use permit from the **DEPARTMENT OF TRANSPORTATION DISTRICT ENGINEER'S OFFICE** of the **DISTRICT** in which the work is to be done, by written application in which are set forth the location, number, kind, and size of trees or shrubs to be cut, sprayed, or

trimmed. A representative of the **DISTRICT ENGINEER** will inspect such proposed work and, if approved, will issue a permit.

5. In the event of the **UTILITY'S** noncompliance with the provisions of this "**MASTER FRANCHISE**", the **STATE** may impose such sanctions as it may deem appropriate, including an immediate stop work order until the **UTILITY** complies. This section is not to be construed as placing any limitation upon either the **UTILITY** or the **STATE** to pursue any legal or equitable remedy available to it for a breach of contract.
6. The granting of this Master Franchise shall in no way operate as an exemption of the holder thereof from any regulatory requirements governing provision of utility service in accordance with law by the governing body of this **STATE** or other regulatory authority.

The signature of the undersigned constitutes the **STATE'S** consent to and endorsement of the provisions of this Master Franchise. An official signature of the representative for the **UTILITY** when affixed hereinafter shall constitute agreement to the terms and conditions herein.

ATTEST:

Secretary

APPROVED FOR THE UTILITY

By: _____

Title: _____

ATTEST:

**Director, Technology and
Support Services**

**APPROVED FOR THE
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION SOLUTIONS**

By: _____

Assistant Director, Engineering Support

Date Department Seal Affixed

APPROVED AS TO FORM

Deputy Attorney General

STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION

USE AND OCCUPANCY AGREEMENT

THIS AGREEMENT, executed in triplicate, made this _____ day of _____, by and between _____, a Delaware corporation, with offices at _____, hereinafter referred to as “_____,” and the DEPARTMENT OF TRANSPORTATION, a Department of the State of Delaware, hereinafter referred to as the “DEPARTMENT,”

WITNESSETH:

WHEREAS, _____ desires to construct and install a _____, to be located in the State's right of way located across Public Road No. _____ to run a distance of R/W _____ feet, plus or minus, beginning at _____ and ending at _____ as shown on Drawing No. _____ attached hereto as Exhibit A, and made a part hereof; and,

WHEREAS, the DEPARTMENT has the authority to enter into this AGREEMENT pursuant to the provisions of Title 17, Delaware Code, Section 132 (d), as amended; and

WHEREAS, the location of said _____ is both described and necessary and will not restrict the use of said road by the public;

NOW, THEREFORE, in consideration of the promises and the terms and conditions hereinafter set forth, the parties agree as follows:

1. That _____ shall be permitted to construct, renew, relocate, replace, maintain, and operate a _____ together with the necessary fixtures and appurtenances across Public Road No. _____ in the manner indicated on said Drawing No. _____ dated _____. The installation will adhere to the standards as set forth in Department Utilities Manual. If a utility fails to comply with any of the conditions, restrictions or regulations prescribed by DeIDOT, action will be taken as specified in the Utilities Manual.

2. _____ agrees to indemnify and save harmless the DEPARTMENT of and from all suits and damages arising from or on account of the construction or operation of said _____.

3. Whenever in the reasonable judgment of the DEPARTMENT said _____ constitutes an unreasonable interference with the use of said road or with any modification, enlargement, or alteration of said road, _____ agrees upon reasonable notice from the DEPARTMENT to relocate such _____ at its sole cost and expense.

4. The construction of said _____ shall be conducted so as to interfere as little as possible with the traffic along said road. Necessary barricades, suitable and sufficient red lights, danger signals, and/or signs shall be provided for the protection and safety of the public. Placement of temporary traffic control devices shall adhere to the standards as set forth in the Department Traffic Control Manual.

5. When the construction of the _____ has been completed, all existing roadway, shoulder, or other facilities disturbed by construction shall be replaced and an appropriate sign shall be placed identifying the type of installed facility.

_____ agrees:

a. That any damage to the roadway caused during or after the installation of the said _____ attributable to the installation of _____ shall be the sole responsibility of _____.

b. To place and permanently maintain in place, on a suitable post, a sign which shall be furnished by the DEPARTMENT. The sign shall identify the type of underground facility installed in accordance with the color coding described in Chapter 8 of Title 26 of the Delaware Code, entitled "Underground Utility Damage Prevention and Safety."

6. It shall be the sole responsibility of the DEPARTMENT's representative to inspect the completed facility and ensure that the sign has been placed properly and on a permanent basis.

7. _____ shall obtain permission of the DEPARTMENT prior to making any other use of the _____ other than that for the transmission of _____.

8. The DEPARTMENT reserves the right to change the terms of this AGREEMENT providing that the terms of the AGREEMENT will in no case be more burdensome to _____ than are the terms to any other non-public corporation under similar circumstances.

9. When duly executed, this AGREEMENT shall be binding upon the parties hereto and their successors and assigns.

DELDOT UTILITIES MANUAL

10. This AGREEMENT is for a period of 20 years with _____
_____ having the option to renew for additional periods of 20 years and 10
years respectively, making a total possible period of 50 years from the effective date of the AGREEMENT,
which is the date first above written.

IN WITNESS WHEREOF, each party hereto has caused this AGREEMENT to be executed in triplicate
in its name and behalf by its duly authorized officer, as of the day and year first above written.

BY:

Signature and Title

Sworn to and subscribed before me this _____ day of _____, 19____.

Notary Public

My commission expires:

Attest:

Department of Transportation

PUBLIC WORKS ENGINEER

BY: _____
(_____) DISTRICT ENGINEER

DATE: _____

Appendix C
Utility Cost Estimates

CHECKLIST FOR UTILITY RELOCATION ESTIMATES

A) Preliminary Engineering Estimate:

All items have been completed with amounts shown for each applicable item and any appropriate attachments should be included.

1. Prior Rights (Utilities Manual Section 4.3.2)

Documentation of Compensable Interest

or

Executed agreement between DeIDOT and utility.

The Department must approve all documentation.

2. Preliminary Engineering Estimate – Estimate of costs associated with engineering and right-of-way acquisition necessary to prepare the design plans and construction estimate (PS&E package).

Preliminary Engineering Estimate – see Section A. Utility Cost Estimate Format

The Department may waive detailed Preliminary Estimate.

3. Use of Consulting Engineer (Utilities Manual Section 4.3.4.4)

Request to Utility Engineer requesting authorization for approval/authorization of consultant.

Preliminary sketches, estimates, and fee schedule.

Approval by State (and FHWA if applicable.)

Agreement conforming to FHWA and US DOT regulations if federal involvement.

B) Construction Estimate (PS&E):

1. DeIDOT approval of Preliminary Engineering Estimate – Notice to Proceed. The utility must have this before starting the PS&E design package to remain eligible for reimbursement. The Utilities Section of Transportation Solutions, Engineering Support provides the Notice to Proceed for Preliminary Engineering. Any materials purchased or work performed prior to authorization by the Utilities office will be done at the Company's sole expense.

2. PS&E Package (Utilities Manual Section 4.3.4.5). Four (4) complete sets of:

Detailed estimate of work to be performed – see Section B. Utility Cost Estimate Format.

Marked color-coded plans indicating:

1. existing to remain,
2. existing to remove,
3. proposed reimbursable,
4. proposed non-reimbursable.

Terms under which utility is crossing or occupying highway r/w

- Description of facility to be located within the r/w
- Description of installations construction, traffic protection, maintenance, access restrictions and any special conditions
- List of materials to be installed, removed or abandoned.
- Salvage Credit itemized list
- Expired Service Life Credit

C) Betterment (Utilities Manual Section 4.3.1)

1. In the event of betterment, two (2) complete PS&E packages are required. One is the Construction Estimate outlined above and the second is the Betterment Estimate including any upgrade of facilities made solely for the benefit of and at the election of the utility.
2. **Betterment Estimate**: PS&E Package (Utilities Manual Section 4.3.4.5).
Four (4) complete sets of:
 - Detailed estimate of work to be performed – Section B. Utility Cost Estimate Format.
 - Marked color-coded plans indicating:
 1. existing to remain,
 2. existing to remove,
 3. proposed reimbursable,
 4. proposed non-reimbursable.
 - Terms under which utility is crossing or occupying highway r/w
 - Description of facility to be located within the r/w
 - Description of installations construction, traffic protection, maintenance, access restrictions and any special conditions
 - List of materials to be installed, removed or abandoned.
 - Salvage Credit itemized list
 - Expired Service Life Credit

Appendix D
References

The list that follows includes publications referred to elsewhere in this manual as well as publications not referenced yet pertinent to the subject of utilities. Current versions are to be referenced.

State of Delaware

- *Court of Chancery*
- *The Delaware Code*

Delaware Department of Transportation (DelDOT)

- *Bridge Design Manual.*
- *Corridor Capacity Preservation Program.*
- *Functional Classification Maps*
- *Landscaping and Reforestation Act Implementation (Appendix A of the Road Design Manual).*
- *Public Utilities Annual Master Franchise.*
- *Road Design Manual.*
- *Standards and Regulations for Subdivision Streets and State Highway Access.*
- *Standard Specifications.*
- *Supplemental Specifications.*
- *Traffic Controls for Streets and Highways Construction, Maintenance, and Utility Operations (“Traffic Control Manual”).*

Federal Highway Administration (FHWA)

- *Federal-Aid Policy Guide (FAPG):*
 - *Code of Federal Regulations, Title 23, Highways, Part 645 – Subpart A and B;*
 - *Code of Federal Regulations, Title 49, Highways, Part 21—civil rights compliance.*
- *Manual on Uniform Traffic Control Devices, U.S. Department of Transportation.*
- *Program Guide: Utility Relocation And Accommodation on Federal-Aid Highway Projects.*

American Association of State Highway and Transportation Officials (AASHTO)

- *A Policy on Geometric Design of Highways and Streets (AASHTO’s Green Book).*
- *A Policy on the Accommodation of Utilities Within Freeway Right-of-Way.*
- *Guide for Accommodating Utilities Within Highway Right-of-Way.*
- *Roadside Design Guide*

American National Standards Institute

- *ANSI A300 (Part 1)-2001 Title: Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance – Standard.*

National Codes and Regulations

Electric Power and Communications:

- *Institute of Electrical and Electronic Engineers. National Electric Safety Code (NESC).*

Fiber Optic Facilities:

- *Standard for the Physical Location and Protection of Below-Ground Physical Plant (Electronic Industries Association/Telecommunications Industry Association EIA/TIA-590);*
- *NESC Provisions for Communications Cable. Standard for Physical Location and Protection of Below-Ground Fiber Optic Cable Plant.*

Liquid Petroleum Pipelines:

- *American Petroleum Institute Recommended Practice for Steel Pipelines Crossing Railroads and Highways.*

Pipelines Carrying Natural Gas and Hazardous Materials:

- *U.S. DOT rules and regulations governing transportation of such materials, including CFR49, Parts 192 and 195.*

Pressure Pipelines:

- *Standards of Pressure Piping of the American Society of Mechanical Engineers, (ASME B31.4 to B 31.8.)*

Subsurface Utility Data:

- *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, (American Society of Civil Engineers CI/ASCE 38-02).*

Water Transmission and Distribution:

- *American Water Works Association (AWWA).*

Occupational Safety and Health Administration

- *OSHA Technical Manual.*

Other

- *U.S. Architectural and Transportation Barriers Compliance Board. Code of Federal Regulations. Title36*
- *Part 1191-Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities,*
- *Architectural Barriers Act (ABA) Accessibility Guidelines, Washington, DC*

Appendix E
HDPE Requirements

Reserved for future

Appendix F
Construction Specifications

208500 - FLOWABLE FILL

Description:

This work consists of furnishing and placing flowable fill material at locations as specified in the Plans and as directed by the Engineer.

Materials:

Flowable fill shall consist of a combination of the following materials: Portland cement, ground granulated blast furnace slag, fly ash, fine aggregate, water, and chemical admixtures. The exact mixture design, including chemical admixtures, shall be submitted by the Contractor showing the proportions of the above referenced materials that will meet the Specifications.

Portland Cement shall meet the requirements of Section 801 of the Standard Specifications.

Ground Granulated Blast Furnace Slag shall meet the requirements of AASHTO M302, Grade 100 or Grade 120.

Fly Ash shall meet the requirements of Section 822 of the Standard Specifications. The fly ash shall be free of lumps, dirt, debris, and other contamination. Material test data of fly ash representative of the source shall be submitted to the Engineer a minimum of 30 days prior to use. Test data shall include characteristics of the ash leachate as determined by the Toxicity Characteristics Leaching Procedure (TCLP) in accordance with EPA SW-846, with respect to leachate metals

Fine Aggregates shall meet the requirements of Section 804 of the Standard Specifications.

Water shall meet the requirements of Section 803 of the Standard Specifications.

Chemical Admixtures shall meet the requirements and be used according to the manufacturers recommendations.

The sources of all materials and the mix design shall be submitted to the Engineer a minimum of 30 days prior to use, in order to allow testing of the mix design (using representative material samples) by the Engineer. The design shall produce a material with a 28-day compressive strength of 50 to 200 psi. Flowable fill is not intended to be used where a quick strength development is required, although the addition of an accelerator may be allowed where an early gain in strength is desirable.

Compliance with compressive strength requirements shall be tested in accordance with the following AASHTO test methods:

T-22, Compressive Strength of Cylindrical Concrete Specimens.

T-23, Making and Curing Concrete Test Specimens in the Field.

Construction Methods:

Materials for this item shall be central mixed, truck mixed, or as approved by the Engineer.

Flowable fill shall be transported to the project in ready-mix trucks or as approved by the Engineer. The elapsed time between introduction of water and placement of the fill shall not exceed three hours.

The ambient temperature shall be a minimum of 40 degrees Fahrenheit and rising to begin placement of flowable fill. The temperature of the flowable fill shall be a minimum of 50 degrees Fahrenheit at time of placement. Flowable fill shall not be placed against frozen surfaces and shall be protected from freezing for at least 36 hours using insulation.

Prior to placement, the Contractor shall provide positive containment of the fill material to prevent flow beyond the desired placement location. Flowable backfill shall be discharged at a rate that will allow the material to flow into the placement location, fill all voids, and not dislodge the existing containment or interior items. Relief holes shall be made wherever necessary to ensure that all voids are filled. Any interior items shall be capable of withstanding lateral hydraulic pressures of the flowable fill. Lift thickness shall not exceed 5 feet in depth. Prior to placement of successive lifts or other loadings, fill shall be allowed to cure until it is self-supporting.

Care shall be taken to prevent pipes from floating. Straps, soil anchors, or other approved means of restraint may be required to ensure proper alignment when flowable fill is used as backfill for pipes. Ensuring proper alignment is the sole responsibility of the Contractor.

The backfill shall be placed to the final lines and grades as shown on the Plans. All confining and supporting structures, protective covers, and barriers shall be maintained by the contractor until the backfill is self-supporting. The Contractor should be aware that shrinkage of the flowable fill as it cures may require additional backfill with another material.

Backfill shall be protected from direct contact with vehicular traffic and shall be protected from prolonged exposure to rain and or running water.

302514 – MILLED HOT-MIX BASE COURSE - ROTOMILLINGS

302514 – MILLED HOT-MIX BASE COURSE

Description:

It is the intent of this Special Provision to qualify the use of milled hot-mix asphalt pavement material in lieu of graded aggregate as a base course. All requirements of Section 302 shall remain in effect except as modified below:

Materials:

The material used to construct milled hot-mix asphalt pavement base courses shall be uniformly graded with a maximum size of 1 ½" (38 mm).

Subgrade Preparation. The subgrade shall be properly constructed in accordance with Subsection 202.06. No base course material shall be placed until the subgrade has been approved by the Engineer.

Placement.

- (a) *Equipment.* The milled material shall be spread uniformly by an approved spreading machine or box in such a manner that no segregation occurs. A conventional motor grader will not be approved for placement of milled material on mainline roadway sections.

Where it is not possible to use a spreading machine or box in patching or other tight areas, other approved methods can be used only in such manner that no segregation occurs. Compaction shall be uniformly attained by approved rollers or compactors. No milled materials shall be placed until approved equipment is on the Project site and is operational

- (b) *Spreading and Compacting.* Milled material shall be placed in successive layers. Each layer shall be placed in a level, uniform cross-section not to exceed 8" (200 mm) in depth, loose measurement, unless otherwise approved by the Engineer. The milled material shall be deposited and spread parallel to the centerline and the layer shall extend to the full width as shown on the Plans. The milled material shall be handled so that no segregation of fine or coarse particles occurs. No more than 1,000' (300 m) of material, as measured along the roadway centerline, shall be spread in advance of compaction operations. Each layer shall be properly compacted as specified, before starting the next layer.

Compaction or rolling shall be performed parallel to the roadway centerline starting at the edges and progressing toward the center. It shall continue until each layer is thoroughly and uniformly compacted to the full width as shown on the Plans.

The milled material shall be compacted by the following method: a sheepfoot roller (10 ton minimum) shall make the required number of passes on the base material to achieve the target density followed by a back-drag by either a bulldozer or a motor grader. After the pavement base material has been placed, a 10 ton / 1800 vpm (minimum) vibratory steel wheel roller shall compact the base material. Compaction will be measured per subsection (c) *Performance* below. In small areas, where the above noted equipment cannot be used, the contractor must request approval from the Department to place the millings with other equipment. The Department reserves the right to reject or approve the areas for placement of millings as determined by the Engineer.

After compaction, all voids in the surface of each layer will be filled with millings and

compacted (with the vibratory steel wheel roller) until the layer of base material is well bonded and firm, as determined by the Engineer.

In no case shall vehicles be allowed to travel in a single track or to form ruts in the base course. If any sharp irregularities are formed in the subgrade or base course material, the affected area shall be scarified to a depth of 6" (150 mm) and compacted to conform to the requirements of Section 202 or this Section

- (c) *Performance.* Compaction of milled hot-mix asphalt pavement base courses will be monitored by measuring the in-place density using a density gauge and comparing it to a control strip target density. The mean base compaction shall be at least 98% of the control strip target density and sufficiently uniform that individual test results are at least 96% of the control strip target density. If any individual test result falls below 96% of target density, the base course represented by the test will be considered defective and the Contractor shall further compact the area. After further compaction, the original test site and one other randomly selected site within the area will be tested. The average of the two test results will be included in the mean density for that day's placement.

To determine the control strip target density, a control strip with a minimum length of 300' (90 m) shall be constructed at the beginning of work on each pavement base. Each control strip is to remain in place and become a section of the completed roadway. A control strip shall have an area of at least 400 yd² (325 m²). For small areas, the contractor may request to have a test strip waived. This request shall be submitted to the Engineer for review.

Upon completion of the rolling, the mean density of the control strip will be determined by averaging the results of the density tests taken at randomly selected sites within the control strip. The mean density of the control strip shall be the target density for the remainder of the pavement base course which it represents. Compaction shall be expressed as a percentage of the target density

The finished surface of the graded aggregate base course shall not vary from that required on the Plans by more than 1/2" (13 mm) when tested with a 10' (3.048 m) straightedge applied to the surface parallel to the centerline of the pavement and when tested with a template cut to the cross-section of the pavement. The actual thickness of the graded aggregate base course shall not be more than 1/2" (13 mm) less than the thickness shown on the Plans; however, the actual thickness may be greater than that shown on the Plans. Those portions of completed base course not meeting these performance requirements shall be completely removed and replaced with proper material placed in accordance with this Section.

A straightedge meeting the approval of the Engineer shall be supplied by the Contractor at each placement operation. The straightedge shall be constructed of rigid materials that resist warping and bending.

Method of Measurement:

The quantity of milled hot-mix base course will be measured by the cubic yard (cubic meter). The volume of cubic yards (cubic meters) will be measured as the number of square yards (square meters) of surface area of milled hot-mix base course, placed and accepted, multiplied by the depths shown on the Plans. If the depth of milled hot-mix base course, placed and accepted, is greater than the depth shown on the Plans, the Plan depth will be used to measure the quantity of payment.

If the limits of measurement for pay quantities for milled hot-mix base course are designated on the Plans, the quantity of milled hot-mix base course measured for payment will be the number of square yards (square meters) of surface area multiplied by the depth, placed within the payment lines and grades shown on the Plans. If the limits

are not designated on the Plans, or have been changed by the Engineer, in-place dimensions of the accepted milled hot-mix base course will be established. The computation of quantity will be made from cross-sections taken after the completion of work under this Section.

Materials placed beyond the designated lines and grades as shown on the Plans or beyond the limits established by the Engineer will not be measured for payment.

There will be no separate payment made for filling voids with millings as required under Placement subsection (b) *Spreading and Compaction*.

Basis of Payment:

The quantity of milled hot-mix base course will be paid for at the Contract unit price per cubic yard (cubic meter) installed, as required by the Contract for this material. Price and payment will constitute full compensation for hauling, stockpiling (includes any double handling of material), preparing the subgrade, placing and compacting the materials, and for all labor, equipment, tools, and incidental required to complete the work.

No additional compensation will be made to the contractor to crush, screen, or otherwise modify the milled hot-mix base course to meet the necessary gradation.

No payment will be made for materials placed beyond the designated lines and grades as shown on the Plans or beyond the limits established by the Engineer.

NE - 10/31/05

401665 - SUPERPAVE, TYPE C HOT-MIX

Description:

The following Subsections of the Standard Specifications shall be applicable: 401.01, 401.03 - 401.10, 401.12, and 401.13. All other subsections have been modified herein.

The Contractor shall read and thoroughly understand the requirements of the QA/QC specification as defined in item 401699. It is the responsibility of the Contractor to determine all costs associated with meeting these requirements and to include them in the per ton bids for the various Superpave bituminous concrete items. The Contractor shall also be aware that the pay adjustment factors in item 401699 will be applied to the Superpave bituminous concrete payments to determine the bonus or penalty for the item.

Materials:

Materials for hot-mix, hot-laid bituminous concrete shall conform to the requirements of Subsections 823.01, 823.05- 823.17, and 823.25 - 823.28 of the Standard Specifications and the following.

Asphalt Binder:

The asphalt binder shall meet the requirements of Superpave PG 64-22, PG 70-22, or PG 76-22 performance grade asphalt, as referenced in the Plans, according to M-320, Table 1 and tested according to AASHTO PP6 with the following test ranges:

TEST PROCEDURE	AASHTO REFERENCE	SPECIFICATION LIMITS
Temperature, EC	M-320	Per Grade
Original DSR, $G^*/\sin(\delta)$	T-315	1.00 - 2.00 kPa
RTFO DSR, $G^*/\sin(\delta)$	T-315	2.20 - 5.00 kPa
PAV DSR, $G^*/\sin(\delta)$	T-315	1400 - 5000 kPa
BBR Creep Stiffness	T-313	90.0 - 300.0 kPa
BBR value	T-313	0.300 - 0.440

Substitution of a higher temperature grade will require prior approval by the Engineer. If PG 76-22 is the specified binder, recycled asphalt pavement(RAP) and natural sand shall not be allowed in the mixture. If a producer would like to submit a mixture with natural sand, the Engineer will perform a deformation test using the Asphalt Pavement Analyzer (APA). The sample will be tested per AASHTO TP xxx Determining Rutting Susceptibility of Asphalt Paving Mixtures Using the Asphalt Pavement Analyzer (APA) . If the depth of measured

permanent deformation is 2 mm or less after 8000 strokes and a fatigue criteria of less than 1.0 mm/stroke after at least 50000 strokes, the mixture may be approved for use.

Shingles:

Only shingles reclaimed from shingle manufacturer s such as tabs, punch-outs, and damaged new shingles shall be allowed in the mixture. Post-consumer shingles or used shingles shall not be permitted in the mixture and all shingles shall be free of all foreign material and moisture. Fiberglass-backed and organic felt-backed shingles shall be kept separately and both materials shall not be used in the same mixture at the same time. The shingles shall be broken down in the mixing process with 100% passing the in (12.5 mm) sieve. Shipping, handling, and shredding cost are incidental to the price of Superpave bituminous concrete.

The overall percentage of RAP and recycled shingles (5% maximum) shall not exceed 20% of the mixture. The RAP and recycled shingles mixture are not permitted on wearing course.

Mineral Aggregate:

The mineral aggregate employed in the target gradation of the job mix formula (JMF) shall conform to Section 805 and the following criteria. These criteria apply to the combined aggregate blend.

DESIGN ESAL S (MILLIONS)	COARSE AGGREGATE ANGULARITY ¹ (% MIN)		FINE AGGREGATE ANGULARITY ² (% MIN)		CLAY CONTENT ³ (% - MIN)	FLAT AND ELONGATED ⁴ (% - MAX)
	# 100 MM	> 100 MM	# 100 MM	> 100 MM		
< 0.3	55/-	-/-	-	-	40	-
0.3 to < 3	75/-	50/-	40	40	40	10
3 to <10	85/80 ⁵	60/-	45	40	45	
10 < 30	95/90	80/75	45	40	45	
≥30	100/100	100/100	45	45	50	

¹Coarse Aggregate Angularity is tested according to ASTM D5821.

²Fine Aggregate Angularity is tested according to AASHTO TP-33.

³Clay Content is tested according to AASHTO T176.

⁴Flat and Elongated is tested according to ASTM 4791 with a 5:1 aspect ratio.

⁵ 85/80 denotes that 85% of the coarse aggregate has one fractured face and 80% has two or more fractured faces.

The following source properties apply to the individual aggregates in the aggregate blend for the proposed JMF.

TEST METHOD	SPECIFICATION LIMITS
Toughness , AASHTO T96 Percent Loss, Maximum	40
Soundness , AASHTO T104 Percent Loss, Maximum for five cycles	20
Deleterious Materials , AASHTO T112 Percent, Maximum	10
Moisture Sensitivity , AASHTO T283 Percent, Minimum	80

For any roadway with a minimum average daily traffic volume (ADT) of 8000 vehicles and a posted speed of 35 mph (60 kph) or greater, the polish value of the composite aggregate blend shall be greater than 8.0 when tested according to Maryland State Highway Administration MSMT 411 Laboratory Method of Predicting Frictional Resistance of Polished Aggregates and Pavement Surfaces. RAP shall be assigned a value of 4.0. The contractor shall supply all polish values to the Engineer upon request.

Mineral Filler:

The mineral filler shall conform to AASHTO M17.

Mixture Requirements:

Gradation: The FHWA Superpave 0.45 Power Chart with the recommended restricted zone shall be used to define permissible gradations for the specified mixture. Type C shall be either a No.4 (4.75 mm), 3/8 (9.5 mm), or 1/2 (12.5 mm) Nominal Maximum Aggregate Size Hot-Mix. Unless otherwise noted in the Plans, the Type C shall meet the 3/8 (9.5 mm) Nominal Maximum Aggregate Size. Type B Hot-Mix shall be the 3/4 (19.0 mm) Nominal Maximum Aggregate Size and the Bituminous Concrete Base Course (BCBC) shall be the 1 (25.0 mm) Nominal Maximum Aggregate Size. Target values for percent passing each standard sieve for the design aggregate structure shall comply with the Superpave control points and should avoid the restricted zone. Percentages shall be based on the washed gradation of the aggregate according to AASHTO T11.

In addition to the results of the material requirements specified above, the following material properties shall be provided by the contractor: bulk specific gravity G_{sb} , apparent specific gravity G_{sa} , and the absorption of the individual aggregate stockpiles to be used, tested according to AASHTO T84 and AASHTO T85 and reported to three decimal places along with the specific gravity of the mineral filler to be used, tested according to AASHTO T100 and reported to three decimal places.

Superpave Gyratory Compactive (SGC) Effort:

The Superpave Gyrotory Compaction effort employed throughout mixture design, field quality control, or field quality assurance shall be as indicated below. All mixture specimens tested in the SGC shall be compacted to N_M Height data provided by the SGC shall be employed to calculate volumetric properties at N_I , N_D , and N_M

Superpave Gyrotory Compactive (SGC) Effort:

DESIGN TRAFFIC LEVEL (MILLION ESAL S)	$N_{INITIAL}$	N_{DESIGN}	$N_{MAXIMUM}$
0.3 to < 3	7	75	115
3 to < 30	8	100	160
≥30	9	125	205

Volumetric Design Parameters. The design aggregate structure at the target asphalt cement content shall satisfy the volumetric criteria below:

DESIGN ESAL S (MILLION)	REQUIRED DENSITY (% OF THEORETICAL MAXIMUM SPECIFIC GRAVITY)			VOIDS-IN-MINERAL AGGREGATE (% - MINIMUM) NOMINAL MAX. AGGREGATE (MM)					VOIDS FILLED WITH ASPHALT (% - MINIMUM)
	$N_{INITIAL}$ L	N_{DESIGN}	N_{MAX}	25.0	19.0	9.5	12.5	4.75	
0.3 to < 3	# 90.5	96.0	# 98.0	12.0	13.0	15.0	14.0	16.0	65.0 - 78.0
3 to < 10	# 89.0	96.0	# 98.0	12.0	13.0	15.0	14.0	16.0	65.0 - 75.0 ¹
10 < 30									
≥ 30									

Air voids (V_a) at N_{design} shall be 4.0% for all ESAL designs. Air voids (V_a) at N_{max} shall be a minimum of 2.0% for all ESAL designs

The dust to binder ratio for the mix having aggregate gradations above the PCS Control Points shall be 0.6-1.2. For aggregate gradations below the PCS Control Points, the dust to binder ratio shall be 0.8-1.6. For the No. 4 (4.75 mm) mix, the dust to binder ratio shall be 0.9-2.0 whether above or below the PCS Control Points.

For 3/8 (9.5 mm) Nominal Maximum Aggregate Size mixtures, the specified VFA range shall be 73.0% to 76.0% and for 4.75 mm Nominal Maximum Size mixtures, the range shall be 75 % to 78% for design traffic levels ≥3 million ESALs.

Gradation Control Points:

The combined aggregates shall conform to the gradation requirement specified in the follow table when tested according to T-11 and T-27.

Nominal Maximum Aggregates Size Control Points, Percent Passing										
	25.0 MM		19.0 MM		12.5 MM		9.5 MM		4.75 MM	
SIEVE SIZE	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
37.5 MM	100	-	-	-	-	-	-	-	-	-
25.0 MM	90	100	100	-	-	-	-	-	-	-
19.0 MM	-	90	90	100	100	-	-	-	-	-
12.5 MM	-	-	-	90	90	100	100	-	100	-
9.5 MM	-	-	-	-	-	90	90	100	95	100
4.75 MM	-	-	-	-	-	-	-	90	90	100
2.36 MM	19	45	23	49	28	58	32	67	-	-
1.18 MM	-	-	-	-	-	-	-	-	30	60
0.075 MM	1	7	2	8	2	10	2	10	6	12

Note: The aggregates gradation for each sieve must fall within the minimum and maximum limits.

Gradation Classification:

The Primary Control Sieve (PCS) defines the break point of fine and coarse mixtures. The combined aggregates shall be classified as coarse graded when it passes below the Primary Control Sieve (PCS) control point as defined below. All other gradations shall be classified as fine graded.

PCS CONTROL POINT FOR MIXTURE NOMINAL MAXIMUM AGGREGATES SIZE (% PASSING)					
Nominal maximum Aggregates Size	25.0 mm	19.0 mm	12.5 mm	9.5 mm	4.5 mm
Primary Control Sieve	4.75 mm	4.75 mm	2.36 mm	2.36 mm	1.18 mm
PCS Control Point	40	47	39	47	30-60

Plant Production Tolerances:

Volumeric Property	Superpave Criteria
Air Voids (V_a) at (%) N_m	2.0 (min)
Air Voids (V_a) at N_{design} (%)	5.5 (max)
Voids in Mineral Aggregate (VMA) at N_{design}	
25.0 mm Bituminous Concrete Base Course	-1.2
19.0 mm Type B Hot-Mix	+2.0
12.5 mm Type C Hot-Mix	
9.5 mm Type C Hot-Mix	
4.5 mm Type C Hot-Mix	

Design Evaluation:

The contractor shall furnish a Job Mix Formula (JMF) for review and approval. The Engineer may elect to evaluate the proposed JMF and suitability of all materials. All materials requested by the Engineer shall be provided at the contractors expense to the Central Laboratory in Dover in a timely manner upon request. To verify the complete mixture design and evaluate the suitability of all materials, the following approximate quantities are required:

- 5.25 gal (20 liters) of the asphalt binder,
- 0.13 gal (0.5 liter) sample of liquid heat-stable anti-strip additive,
- 254 lb (115 kg) of each coarse aggregate,
- 154 lb (70 kg) of each intermediate and fine aggregate,
- 22 lb (10 kg) of mineral filler, and
- 254 lb (115 kg) of RAP, when applicable.

The proposed JMF shall include the following:

Plot of the design aggregate structure on the FHWA Superpave 0.45 power chart showing the maximum density line, Superpave control points, and recommended restricted zone.

Plot of the three trial asphalt binder contents at +/- 0.5% gyratory compaction curves where the percent of maximum specific gravity (% of G_{mm}) is plotted against the log base ten of the number of gyrations ($\log(N)$) showing the applicable criteria for N_i , N_d , and N_m .

Plot of the percent asphalt binder by total weight of the mix (P_b) versus the following:

- % of G_{mm} at N_d , VMA at N_d , VFA at N_d , Fines to effective asphalt binder (P_{be}) ratio, and unit weight (kg/m^3) at both N_d and N_m .

Summary of the consensus property standards test results for the design aggregate structure, summary of the source property standards test results for the individual aggregates in the design aggregate structure, target value of the asphalt binder content, and a table of G_{mm} of the asphalt mixture for the four trial asphalt binder contents determined according to AASHTO T209.

The JMF shall also include the NCAT Ignition Oven calibration for the specific materials utilized for this mix.

Compaction:

Compaction shall be tested and paid per Item 401699 - Quality Control/Quality Assurance of Bituminous Concrete .05 (b) Pavement Construction - Tests and Evaluations.

Method of Measurement and Basis of Payment:

Method of Measurement and Basis of Payment will be in accordance with Subsections 401.14 and 401.15 of the Standard Specifications.

The item 401699, will define adjustment factor to be applied to the bituminous concrete payments for bonus or penalty.

NE - 12/4/03

Appendix G
Legislation

House Bill No. 437

SPONSOR: Rep. Smith & Sen. DeLuca;
Reps. Roy, Hudson, Miro;
Sens. Adams, Amick, Henry

HOUSE OF REPRESENTATIVES

142nd GENERAL ASSEMBLY

HOUSE BILL NO. 437

AN ACT TO AMEND TITLE 17 AND TITLE 29 OF THE DELAWARE CODE RELATING TO THE DEPARTMENT OF TRANSPORTATION.

1 WHEREAS, the Department of Transportation, in the execution of its duties, is required
2 routinely to negotiate agreements with public utility companies for the purpose of altering or relocating
3 public utility facilities within or adjacent to the highways of the State; and

4 WHEREAS, existing legislation governing the acquisition of the interest of public utility
5 companies and the altering or relocation of their facilities is both vague and cumbersome to apply,
6 resulting in delays in the commencement and completion of urgent highway construction projects; and

7 WHEREAS, the General Assembly finds that the Department of Transportation has been
8 unnecessarily hindered in the execution of its public duties by the lack of flexibility in its authority to
9 negotiate alteration or relocation agreements with public utility companies; and

10 WHEREAS, the Department of Transportation's Utilities Design Manual sets forth guidelines
11 for determining the appropriate reimbursement for public utility facility alteration or relocation in
12 certain circumstances, which guidelines may also be used to assist in the calculation of reimbursement
13 for alterations or relocations authorized herein; and

14 WHEREAS, the cost of obtaining formal appraisals of small properties or minor portions of
15 larger properties can often exceed the fair market value of the property to be acquired; and

16 WHEREAS, with this legislation, the General Assembly intends to create a more cooperative
17 relationship between the Department of Transportation and the State's various public utilities through
18 increased communication and coordination, including, but not limited to, quarterly meetings, field
19 reviews, and the timely distribution of project information and schedules, so that highway improvements
20 needed by the State and its citizens can be planned for and executed with greater dispatch and efficiency
21 and in a manner that is financially fair to all parties;

22 NOW, THEREFORE,

23 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF DELAWARE:

24 Section 1. Amend §143, Title 17 of the Delaware Code by striking §143 in its entirety and by
25 substituting in lieu thereof the following:

26 "§143. Expenses of alteration or relocation of facilities or structures of public utilities.

27 (a) As used in this section:

28 (1) 'facility' includes, but is not limited to, structures and appliances and their
29 appurtenances, poles, wires, conductors, transformers, substations, manholes, vaults,

30 valves, conduits, sewer pipes, gas mains, regulator stations, water pipes, water
31 distribution facilities, and service lines;

32 (2) 'public utility' means a utility defined in 26 Del. C. §102(2) and (4).

33 (b) If required by reason of the construction, reconstruction, relocation, repair, or maintenance
34 of a public highway, the Department of Transportation shall, at its sole expense, make any necessary
35 alteration or relocation of the facilities owned and/or operated by a public utility of a municipality or of
36 any governmental body or political subdivision of the State.

37 (c) The Department may enter into an agreement with a non-municipal or other non-
38 governmental public utility to reimburse it for up to fifty percent (50%) of the cost of the public utility
39 facility's alteration or relocation as part of a highway construction, reconstruction, relocation, repair, or
40 maintenance project if:

41 (1) the existing public utility facility is located within a highway or public right-of-way
42 by grant of franchise; and

43 (2) the alteration or relocation is necessitated by special circumstances, including, but
44 not limited to:

45 (i) a major economic development project in which the public utility's
46 cooperation is critical to accomplishing the project in a timely manner;

47 (ii) recovery from natural disasters such as storms or floods; or

48 (iii) compelling benefit to the traveling public.

49 (d) The determination of whether special circumstances exist under subsection (c)(2) of this
50 section vests solely with the Secretary. The Secretary shall make written findings detailing the nature of
51 the special circumstances and the costs and benefits to the State in altering or relocating a public utility
52 facility. The determination of the Secretary is a public record. The Secretary shall forward a copy of

53 the determination to the Public Service Commission for filing with the public records of the
54 Commission.

55 (e) If construction specifications for the alteration or relocation of a non-municipal or other
56 non-governmental public utility facility, authorized by the Department as part of a highway
57 construction, reconstruction, relocation, repair, or maintenance project, require the use of unique
58 materials or supplies, the Department may enter into an agreement with the public utility for the use of
59 the unique materials or supplies in advance of the construction contract. If the public utility is required
60 to store the unique materials or supplies for more than sixty (60) days prior to their incorporation into
61 the construction work, the Department shall enter into an agreement with the public utility to reimburse
62 the public utility for all or a portion of the actual cost incurred for the storage of the unique materials or
63 supplies.

64 (f) If the Department determines that it is beneficial to enter into an agreement with a non-
65 municipal or other non-governmental public utility for the alteration or relocation of its facilities in
66 advance of the commencement of a highway construction, reconstruction, relocation, repair, or
67 maintenance project, the agreement may include provisions for the Department to reimburse the public
68 utility for increased expenses incurred as a result of the advanced move, including, but not limited to,
69 expenses for the maintenance of traffic, tree and vegetation removal, grubbing, grading, test holes, and
70 surveying.

71 (g) (1) The Department shall reimburse a non-municipal or other non-governmental
72 public utility for the cost of altering or relocating its facility due to a highway
73 construction, reconstruction, relocation, repair, or maintenance project under each of the
74 following circumstances:

- 75 (i) the Department requires a second alteration or relocation of the same public
76 utility facility within ten (10) years from the date of completion of the initial
77 alteration or relocation;
- 78 (ii) the Department alters its plan of construction for the project at any time
79 before its completion, in a manner that requires the public utility to alter or
80 relocate its facility that has already been fully or partially altered or relocated
81 in connection with the project;
- 82 (iii) the Department cancels or does not commence a highway construction,
83 reconstruction, relocation, repair, or maintenance project within a period of
84 two (2) years from the date of authorization;
- 85 (iv) the Department requests a temporary alteration or relocation of the public
86 utility facility.

87 (2) The amount of reimbursement to be paid to a public utility under this subsection is the
88 entire cost of alteration or relocation minus any increase in the value of the altered or new
89 facility and any salvage value derived from the old facility.

90 (h) The Department and a non-municipal or other non-governmental public utility may agree to
91 include in a construction contract between the Department and the Department's contractor or
92 subcontractor a provision to identify specific facility alteration or relocation construction items which
93 will be performed by the Department's contractor or subcontractor instead of by the public utility. The
94 construction items may include, but are not limited to, adjusting manholes and installing conduits, valve
95 boxes, and concrete pads. As part of the agreement, the public utility must agree to reimburse the
96 Department or the Department's contractor or subcontractor for the construction items.

97 (i) The Secretary may enter into an agreement with a non-municipal or other non-governmental
98 public utility that owns or maintains poles in public rights-of-way to attach Department road signs to the

99 poles under such terms and conditions as the public utility considers necessary in order to provide for
100 the safety of the public utility's employees and contractors and to avoid interference with the public
101 utility's operations. The authority given to the Department in this subsection does not alter the public
102 utility's right to refuse access to its poles if it believes that such access would create a safety hazard or
103 interfere with its operations. If the Department attaches a sign to a pole owned or maintained by a
104 public utility, a person alleging injury to person or property as a result of the attachment has no cause of
105 action against the public utility.

106 (j) The Department may enter into an agreement with a non-municipal or other non-
107 governmental public utility regarding the alteration or relocation of the public utility's facilities to
108 reimburse the public utility for the public utility's additional expenses incurred due to the enhancement
109 of the public utility's facilities or of its equipment design, location, placement, or specification, if, in the
110 judgment of the Department, the enhancement will result in net cost savings to the Department, will
111 expedite the project, or will otherwise result in increased public benefit and convenience."

112 Section 2. Amend §9505, Title 29 of the Delaware Code by inserting a new subsection (14) as
113 follows:

114 "(14) For a real property acquisition necessitated by a highway project, an appraisal is
115 unnecessary if the Department of Transportation determines that the valuation of the property to be
116 acquired is uncomplicated and the market value is estimated at fifty-thousand dollars (\$50,000) or less,
117 based on a review of available data. If an appraisal is determined to be unnecessary, the Department of
118 Transportation shall prepare a waiver of valuation. The Department of Transportation may seek from
119 the federal agency funding the project, approval on a case-by-case basis to increase the waiver amount
120 on any valuation over ten-thousand dollars (\$10,000) and up to a maximum of twenty-five thousand
121 dollars (\$25,000), or the amount currently approved by the federal agency, provided that the Department
122 of Transportation offers the property owner the option of having an appraisal prepared. In all cases in

123 which the estimated market value of a property to be acquired is over ten-thousand dollars (\$10,000), the
124 property owner must be given the option of having an appraisal prepared.”.

125 Section 3. Severability clause. If any provision of this Act or the application thereof to any person
126 or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the
127 Act which can be given effect without the invalid provision or application, and, to that end, the
128 provisions of this Act are declared to be severable.

SYNOPSIS

This bill amends Title 17 of the Delaware Code to provide authority for the Department of Transportation to enter into agreements with non-municipal or other non-governmental public utilities: (1) to pay up to 50% of the cost of the alteration or relocation of public utility facilities necessitated by specified special circumstances; (2) for the alteration or relocation of public utility facilities in advance of road construction; (3) to pay for additional costs of alteration or relocation of public utility facilities for storage of unique materials or supplies if not used in a timely manner for a specific project; (4) to permit full payment for costs of second, unnecessary, or temporary alterations or relocations; (5) to obtain reimbursement from a public utility for specific facility alteration or relocation construction items performed by the Department's contractor or subcontractor instead of by the public utility; (6) to permit the Department to attach its road signs to public utility poles; and (7) to allow for payment of the cost of private enhancements where the payment will result in a net cost savings to the Department, will expedite the project, or will otherwise result in increased public benefit and convenience.

The bill also amends §9505, Title 29 of the Delaware Code (Real Property Acquisition Policies) by providing authority to the Department of Transportation to obtain property estimated by the Department to be of a fair market value of less than \$50,000 without the need for a formal appraisal, with the concurrence of the property owner. The bill further conforms the Code to federal regulations by requiring the approval of the funding federal agency, on a case-by-case basis, for the waiver amount on valuations over \$10,000 up to a maximum of \$25,000, or for the amount currently approved by the federal agency, with the concurrence of the property owner.

Appendix H
Sample Utility Statement

UTILITY STATEMENT

State Contract No. 21-045-01

Project ID No. 04-00029

F.A.P. No. ESTP – 2001(28)

Harrington Truck Route

Kent County

September 28, 2006

The following utility companies maintain facilities within the project limits:

AT&T Corp.

Cavalier Telephone

City of Harrington

Comcast Cablevision of Delmarva, Inc.

Delaware Electric Cooperative, Inc.

Delmarva Power Delivery

Delmarva Power/Electric Distribution

Eastern Shore Natural Gas Co. Transmission Design

Verizon Communications, Inc.

The following is a breakdown of the utilities involved, adjustments and/or relocations as required (all stations, offsets, lengths and calendar days are approximate):

AT&T (AT&T Agent = Baker Engineering)

AT&T Local Network Services owns and maintains fiber optic cable facilities along the railroad throughout the limits of the project. At this time, AT&T does not anticipate any new facilities or impact to existing facilities at the railroad grade crossing at Tower Hill Road.

Cavalier Telephone

Cavalier Telephone maintains lines along Farmington Road that will be impacted by the roadway widening and will need to be relocated. The existing lines will be removed and the relocated telephone lines will be moved to new poles placed by Delmarva Power Delivery. It is estimated that 45 calendar days are needed to relocate Cavalier Telephone facilities after the poles are moved.

City of Harrington

The City of Harrington maintains a 6" water main along S. West Street from STA 178+00 to STA 187+00 in the project limits. The water main conflicts with proposed drainage and must be adjusted by the State's contractor in accordance with the Standard Specifications of the City of Harrington as indicated on the contract drawings and/or outlined elsewhere in these special provisions.

The City of Harrington also maintains sewer facilities within the project limits that are in conflict with proposed drainage. Sanitary manholes within the project construction footprint will require vertical adjustment to proposed grade. All adjustments and relocations to the City's existing

September 28, 2006 Page 1 of 6

State Contract No. 21-045-01

Harrington Truck Route

Kent County

facilities will be done by the State's Contractor in accordance with the Standard Specifications of Kent County and the notes on the Plans.

The Contractor shall determine the number of days required and show that in his CPM schedule, but the work is anticipated to take approximately 20 days.

Work on this project must be continuous without crew hold-ups or unnecessary work stoppages. Existing facilities will be abandoned in place after the relocations are completed and placed into service throughout this project. The existing water mains cannot be taken out of service until the new water main has been completely tested and chlorinated.

Comcast Cablevision of Delmarva, Inc.

Comcast Cable maintains fiber optic cable and coaxial cable facilities within the limits of the project. Comcast Cable proposes to relocate the facilities along Farmington Road that will be impacted by the project to new poles placed by Delmarva Power Delivery. It is estimated that 30 calendar days are needed to relocate Comcast facilities.

Delaware Electric Cooperative, Inc.

Delaware Electric Cooperative, Inc. maintains power distribution lines on the Verizon owned poles located along US 13. In some areas, these lines will require relocation. The work will be coordinated with Verizon.

Delmarva Power Delivery (Electric Transmission)

Delmarva Power Delivery maintains a power distribution substation on Farmington Road at approximate station 176+00. The existing wooden pole in front of the substation will be maintained. No other impact to facilities is expected.

Delmarva Power (Electric Distribution)

Delmarva Power maintains both aerial and underground electrical distribution facilities within the limits of this project. They also have electric facilities on Verizon-owned poles at various locations throughout the project. The facilities requiring relocation are on the west side of US Route 13, on the south side of Tower Hill Road, on the west side of Farmington Road, and at the five points intersection.

It is estimated that 40 working days are needed to relocate Delmarva Power Electric Distribution facilities.

For exact location, please contact Miss Utility at (800) 282-8555.

16 Del. C. § 7405B requires notification to and mutually agreeable measures from the public utility from any person intending to carry on any function, activity, work or operation within dangerous proximity of any high voltage overhead line.

DELDOT page/ P#	Conectiv P#	Solution
6 - 110+50	47576/12551	Trench back 3'
6 - 112+50	New	Install new pole
6 - 114+10	47570/12585	Trench back 4'

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 State Contract No. 21-045-01
 Harrington Truck Route
 Kent County

6 - 116+00	New	Install pole
7 - 118+00	47563/12622	Trench back 4'
7 - 120+00	New	Install pole
7 - 121+80	47555/12661	Install pole
8 - 126+50	47552/12708	Trench back 2'
8 - 130+40	New	Install Pole
9 - 142+50	47534/12868	Move pole back 6'.
1 - 144+10	47533/12884	Move pole back 4'.
10 - 146+00	New	Install pole
10 - 150+00	New	Install pole
11 - 160+00	New	Install pole
13 - 175+90	47483/13193	Remove Anchors
14 - 185+15	47479/13289	Move Pole
14 - 185+30	New – on West side	Install pole
14 - 18+70	47472/13296	Move between curb/sidewalk
14 - 186+40	47478/13298	Move pole 10' North
14 - 20+80	47490/13296	Move in line to 20+00. In new grass area.

Eastern Shore Natural Gas Co. Transmission Design

Eastern Shore Natural Gas Co. maintains underground facilities within the limits of the project. They have gas lines under US Route 13 at the railroad crossing near the Fairgrounds Entrance and in the southeast corner of the US 13 NB/DE 14 WB intersection. It is not expected that this project will impact the facilities. However, Eastern Shore Natural gas should be notified of any work near their facilities that could potentially pose a threat to their service.

Verizon Communications, Inc.

Verizon maintains both aerial and buried cables within the project area, and relocations of both will be necessary, due to drainage and road re-alignments.

- Beginning at approximately Station 290.00 on Southbound Rt.13 Verizon will be relocating the pole line on the west shoulder, to the back of the DELDOT right-of-way North until approximately Station 310.00 (North of Tower Hill Rd.) where the new pole line will rejoin the existing. The aerial cables along this stretch will be moved to the relocated pole line.
- At the intersection of Tower Hill Rd. and Rt.13 there are three buried cables, which will all be in conflict with the road re-alignment. These buried cables will be replaced with new aerial cables on a new Verizon pole line, to be placed along the rear edge of DelDOT's right-of-way on the South side of Tower Hill Rd. from approximately Station 11.50 to Station 30.00, pole locations are tentatively as follows: Stations 11.60, 13.25, 14.50, 16.05, 17.40, 18.85, 20.25, 21.65, 23.15, 24.60, 25.60, 26.90, 28.10, 29.30 and 104.50. The cables will be attached to existing Delmarva Power poles and cross Farmington Rd. at Station 103.75.
- Along Farmington Rd. on the West shoulder beginning at Station 103.75 (DP&L pole 47572/12489) the new copper cable will continue aerial North on DP&L's pole line. The

fiber optic cable will remain in its present position on the DP&L pole line. There are several locations for new poles along this section, the Stations are: 112.30, 116.10, 119.80, 130.40, 133.70, 136.40, 139.20, 146.10, 149.90, 163.40, 165.20 and 167.10. The last three on this list will be Verizon Poles and the rest will be DP&L poles.

- At Station 169.00 the copper cable will again go buried at the rear of the DELDOT right-of-way to Station 178.40 where the copper cable will come up a new Verizon pole and cross Farmington Rd. in the air to DP&L's pole line on the East side of the road, continuing North toward the intersection of Farmington Rd. and Commerce St. (Station 185.25). The fiber optic cable will remain in its present position until the intersection where it will be attached to the relocated poles
- Verizon will be relocating poles as depicted on the revised final plans at the intersection of Commerce St. and Farmington Rd. to allow the copper cables on the South West corner of the intersection (Station 185.00) to be abandoned for drainage placement. New pole locations are: Station 185.30 offset 41' W of Farmington Rd. C/L, Station 20.00 offset 22' N of Reese St. C/L, Station 00.90 offset 22' NW of Commerce St. C/L, Station 18.70 offset 22' N of Reese St. C/L. All relocations at this intersection will be aerial to avoid potential conflicts with other Utility placements.
- Verizon will require six weeks for pole line and cable placing, six weeks for cable splicing and transfers and six weeks of lead-time for ordering materials. This estimate is based on DP&L relocations being complete and does not encompass hold up time due to inclement weather; plan changes or other unforeseen obstacles.

GENERAL NOTES

1. The Contractor's attention is directed to Section 105.09 Utilities, Delaware Standard Specifications, August 2001. The Contractor shall contact Miss Utility (1-800-282-8555) two working days prior to any excavation. The Contractor is responsible for the support and protection of all utilities for excavation and/or demolition. The Contractor is responsible for ensuring proper clearances, including safety clearances, from overhead utilities for construction equipment. The Contractor is advised to check the site for access purposes for his equipment and, if necessary make arrangements directly with utility companies for field adjustments for adequate clearances. The Contractor is responsible for rough grading as required by the roadway construction prior to the Utility Company's placing their proposed facilities, unless otherwise indicated on the plans and/or outlined elsewhere in the Contract Documents.
2. It is understood and agreed that the Contractor has considered in his bid all permanent and temporary utility appurtenances in their present or relocated positions as shown on the plans or described in the Utility Statement or are readily discernible and that no additional compensation will be allowed for any delays, inconvenience, or damage due to any interference from the utility facilities and appurtenances or the operation of moving them, except that the Contractor may be granted an equitable extension of time.
3. Coordination and cooperation among the Utility Companies and the State's Contractor are of prime importance. Therefore, the Contractor is directed to contact the following Utility

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State Contract No. 21-045-01
Harrington Truck Route
Kent County

Company representatives with any questions regarding this work prior to submitting bids and work schedules. Proposed work schedules should reflect the Utility Companies' proposed relocations. The Utility Companies do not work on weekends or legal holidays.

Note: It is the Contractor's responsibility to verify the status of any proposed advance relocation work prior to submitting bids.

Mr. Louis Mareello	AT&T Corp.	973-927-1114
Mr. Dennis Smith	Baker Engineering (AT&T)	609-734-7904
Mr. Pete Marano	Cavalier Telephone	392-224-7083
Mr. Alan Moore	City of Harrington	302-398-3423
Mr. Gary Lightcap	Comcast Cablevision of Delmarva, Inc.	302-672-5940
Mr. Donnie Lofland	Delaware Electric Cooperative, Inc.	302-349-3134
Mr. Ray Rouault	Delmarva Power Delivery	302-454-5174
Mr. Robert Wigener	Delmarva Power/Electric Distribution	302-934-3354
Mr. Jason Woody	Eastern Shore Natural Gas Co.	302-734-6710
Mr. Steven Voshell	Verizon Communications, Inc.	302-422-1480

- The information shown in the Contract Documents, including this Utility Statement and the Utility Schedule contained herein, concerning the location, type and size of existing and proposed utilities locations, and timing has been compiled by the Preparer based on information furnished by each of the involved Utility Companies. It shall be the responsibility of the State's Contractor to verify all information and coordinate with the Utility Companies prior to and during construction, as specified in section 105.09 of the standard specifications.

PREPARED AND RECOMMENDED BY:

_____	_____
Consultant	Date

PROJECT MANAGER:

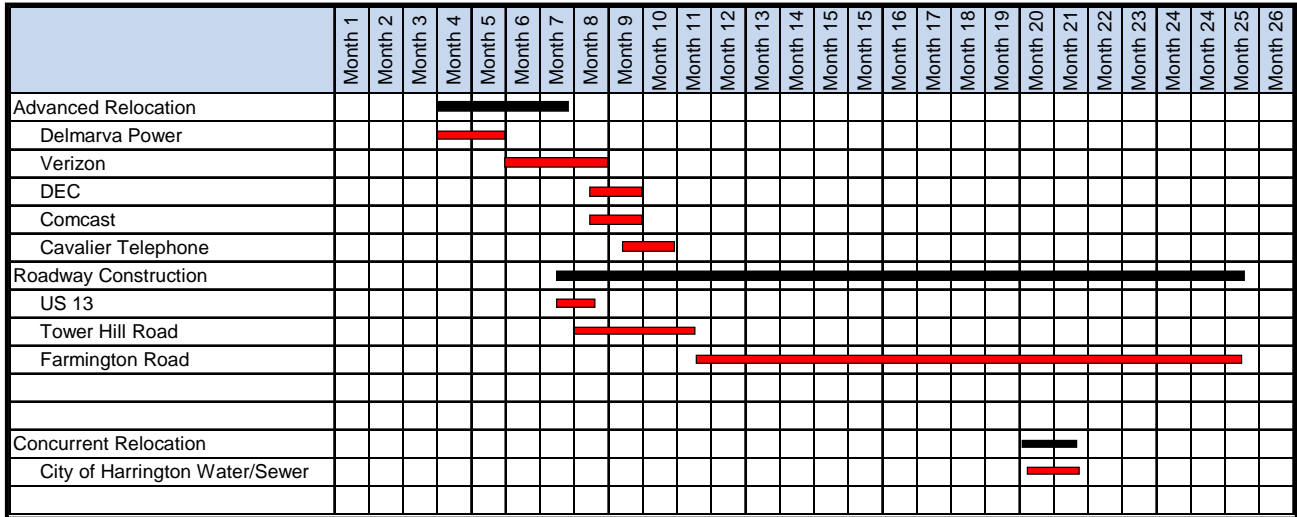
_____	_____
	Date

APPROVED AS TO FORM:

_____	_____
Delaware Department of Transportation Utility Coordinator	Date

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Kent County

SAMPLE UTILITY CONSTRUCTION BAR CHART



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 Kent County

Appendix I
Court of Chancery Decision

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE
IN AND FOR NEW CASTLE COUNTY

DELAWARE POWER & LIGHT COMPANY,)	
a Delaware corporation,)	
)	
Plaintiff,)	
)	
v.)	
)	
N. MAXSON TERRY, HARRY BONK,)	
WILLIAM J. HOPKINS, JR.,)	
THURMAN G. ADAMS, JR., LEMUEL H.)	Civil Action No. 1303
HICKMAN, ALBERT S. MOOR, ELMER)	
PRATT, C. WARDEN GASS, FRANK H.)	
MACKIE, JR., and AUBREY B. LANK,)	
constituting the State Highway)	
Department of the State of Delaware,)	
and WILLIAM J. MILLER, JR., Director)	
of Operations,)	
)	
Defendants.)	

(September 19, 1953)

David F. Anderson of Berl, Potter & Anderson for plaintiff.

S. Samuel Arsht and Richard H. Allen of Morris, Nichols, Arsht & Tunnell for defendants.

SEITZ, Chancellor: Plaintiff, Delaware Power & Light Company, seeks a declaratory judgment determining whether or not it is entitled to receive compensation for the relocation of its poles and wires situated along Sustex Road No. 156. The relocation was required by the reconstruction of the road by the defendant, the Delaware State Highway Department ("defendant").

2.

Plaintiff is a public utility corporation and, among other things, transmits electricity through wires erected upon poles. Plaintiff obtained grants of easements from the owners of lands abutting on Sussex Road No. 556 permitting it to place its poles and wires on such lands. The earliest of such easements was granted on October 20, 1939, and subsequent easements were obtained periodically with the last one being granted on May 26, 1959. Plaintiff from time to time installed its poles and wires along the roadway. In 1960, defendant engaged in a project of widening, relocating and resurfacing this public road, and the project required the use and occupancy of the land upon which plaintiff's poles and wires were situated. Plaintiff relocated its poles and wires, but it was agreed by the parties that such action by the plaintiff was without prejudice to its present claim. Parenthetically, the defendant obtained easements for the purpose of widening the road from the abutting landowners.

Plaintiff contends that since its facilities were located on private property pursuant to easements granted by the owners thereof, the compulsory removal of such facilities was a taking of its property for which it is entitled to receive just compensation. Defendant, on the other hand, maintains that plaintiff's pole line was located without defendant's permission within the highway

right-of-way and therefore the relocation expenses incurred must be borne by it.

Defendant further asserts, in the alternative, that even if the poles and wires were not located within the right-of-way of the highway, they were located "along" the highway and that pursuant to 26 Del. C. §901 the plaintiff was required to obtain the defendant's consent before so locating its lines, which it failed to do. Parenthetically, as a condition of its giving such consent the defendant, as a matter of practice, requires a utility company to agree to relocate its facilities at its own expense when requested to do so. Defendant contends that plaintiff could not circumvent the consent requirement of the statute by erecting its lines "along" the highway without the Highway Department permission. Plaintiff denies that the statute in question applies to poles and lines erected on private property outside the highway right-of-way, which, it contends, was the situation here. Thus, plaintiff takes the position that its lines were not "along" the highway within the meaning of §901 and urges that it was not obliged to obtain defendant's consent before erecting its facilities.

I turn first to the claim of the defendant that it obtained

4.

a prior prescriptive right in the nature of a public right-of-way in the area where the plaintiff's poles were located. Does the evidence in support of such claim establish the requisite adverse user?

Sussex Road No. 556 was laid out in 1809 as a public road pursuant to statute. 1 Del. Laws, Chap. 131(a). Both parties agree that the statutory width of this road was thirty feet. However, defendant contends that such width constituted a minimum standard and that in the present case the actual width of the road was extended by user to include the land upon which plaintiff's facilities were subsequently located.

What are the facts? The road here involved prior to its reconstruction was an unpaved country road without any definite boundaries. The traveled portion was firmly packed and the sides sloped into a ditch line of soft dirt. Along most of this road outside the ditch line lay a growth of weeds which extended to cultivated areas. There were no fences or other monuments by which the boundaries of the road could be definitely fixed. Plaintiff's facilities, with the exception of one pole as to which there is no claim, were located more than fifteen feet from the center line of the road. The poles stood at the edge of the cultivated portion of land and in some instances were surrounded by growing crops.

5.

Prior to 1935, i.e., prior to the emplacement of any of plaintiff's poles, the repair and maintenance of the road in question were under the supervision of the Levy Court of Sussex County. Since then such matters have been supervised by the defendant. Defendant's employees testified that even in recent times no definite plan existed as to the extent of the roadway area to be maintained. In practice only that area was mowed which was not being used by the abutting owners. This maintenance, apart from general maintenance, consisted of scraping the road, keeping it clear of snow, and mowing the weeds twice a year whenever money was available. No evidence was submitted as to the area maintained prior to the erection of plaintiff's poles, which took place from time to time from 1939 to 1959. Before their recent removal, some of the abutting owners plowed toward the road and beyond the poles with deviations to avoid the poles. This pattern of plowing suggests that had the poles not been physically present there, such areas would also have been plowed. Since defendant's policy was to maintain only the area not under cultivation, it is not unreasonable to infer that the areas where

6.

the poles were located had not been maintained by defendant prior to their installation.

It is defendant's contention that regardless of the limits of the road as set by statute, its maintenance action enlarged the right-of-way of the road by prescriptive use. Defendant says that this prescriptive use ripened before plaintiff obtained its easements to erect wires and poles and that plaintiff's easements are inconsistent therewith. Certainly defendant obtained no prescriptive rights superior to plaintiff's easements once plaintiff's poles and wires were erected on the land.

Did defendant obtain rights superior to plaintiff's easements by prescriptive use? One may reasonably infer from the fact that the abutting owners granted easements to plaintiff for the erection of its facilities that they considered that they then had the right to make such conveyances. As to the maintenance by defendant of land beyond its right-of-way, such conduct was not of the character or consistency to warrant the inference that it was a user inconsistent with the rights of abutting owners. The proprietary action on the part of the abutting owners in granting easements to plaintiff when combined with defendant's subservient attitude in its maintenance policy tends to rebut defendant's claim of a prescriptive right to that portion of land upon which plaintiff's facilities were located. In summary, defendant

7.

failed to sustain its burden of proving the requisite adverse user of the area involved.

It need not be decided in this proceeding whether the right-of-way itself presently extends beyond the thirty feet established by statute. All that has been decided here is that defendant did not acquire as against plaintiff superior rights to the area formerly occupied by plaintiff's facilities.

I come next to the question as to whether plaintiff erected its lines contrary to the mandate of §901 requiring the consent of defendant prior to the construction of such facilities "along any highways" within this state. Having failed to obtain any such consent, plaintiff tacitly concedes that if its lines come within the terms of §901 as being "along" the highway, it is not entitled to be compensated for the compulsory removal of its lines and poles.

I come then to the relevant statutory provision which is 26 Del. C. §901:

"Section 901 Location of Lines; Eminent Domain

"(a) Any telegraph corporation, any telephone corporation or any corporation using lines or wires for the transmitting of electrical current, whether created by prior special act or organized under chapter 1 of Title 8, may erect, construct and maintain its telegraph or telephone lines and wires for transmitting electrical current, and the necessary fixtures for the same through and across

8.

or under any of the canals and canal lands, rivers or other waters, and also along any highways within the limits of this State, outside of highways within the limits of and maintained by incorporated cities and towns, subject to the approval or authority of the public authority having charge or control of such highways, and also subject to the right of the owners of the fee on such highways and to the owners abutting upon such highways to full compensation to the extent that their property is taken or burdened.

"(b) Whenever any such corporation cannot agree with any such owner as to purchase or damages, the corporation may proceed for the condemnation of any such franchises, easements, canals, canal lands, rivers, or other waters or highways, or burdens imposed upon landowners abutting upon any highways, whether owners of the fee in the bed of such highways or not, in manner prescribed by chapter 61 of Title 10."

Standing alone, subsection (a) of §901 cannot be construed with any precision with respect to the matters here in issue. The phrase "along any highways" could, I think, equally refer to poles placed on private land outside the right-of-way of the highway as to poles situated within such right-of-way. To assist in interpreting the scope of this provision, therefore, it is necessary for the court to consider the implication of any construction that might be placed upon it.

Subsection (a) of the statute purports to confer powers of eminent domain on utility companies with respect to certain types of property therein specified. If defendant's construction of subsection (a) were adopted by the court, it would follow that a

power of eminent domain could be exercised by a utility company with respect to private property adjoining a highway as well as those lands directly in use for highway purposes. I say this because defendant is in effect contending that the term "along any highways", when describing the lands subject to its control, includes land outside the highway's right-of-way.

The impropriety of adopting defendant's approach to the construction of the statute is made clear when subsection (a) is compared with subsection (b). Subsection (b) of §901 indicates, albeit somewhat inartistically, that a power of condemnation is granted to utility companies only under limited circumstances. One such instance is the condemnation of "highways". Similarly, as I read the statute, such a company may proceed for condemnation with respect to "***burdens imposed upon landowners abutting upon any highways, whether owners of the fee in the bed of such highways or not***".

Nowhere, with the exception of certain enumerated cases not applicable here, does the statute purport to deal with the condemnation of private property outside the highway proper. The reference in subsection (b) to "burdens imposed upon landowners abutting upon any highways" refers to the situation where lines erected within the highway interfere with an abutting owner's easements of access, light, air, etc. Such an owner is given a

10.

right of compensation by the statute even though he does not own the fee in the bed of the highway and even though the facilities in question are not erected on his land. The significant point here for our purposes, however, is that there is no general provision in the statute compensating an abutting owner whose lands are directly taken by a utility company for the erection of poles and the like.

Subsection (a), when read in the light of subsection (b), clearly sustains this construction of the statute. Subsection (a) states that the placement of facilities on the lands therein specified is "***subject to the right of the owners of the fee on such highways and to the owners abutting upon such highways to full compensation to the extent that their property is taken or burdened." When one compares subsection (a) with subsection (b), it is readily apparent that the phrase "taken or burdened" in such portion was not meant to apply seriatim to both the owner of the the fee of the highway and the abutting owner. Rather, I believe, "taken" was meant to apply to the former and "burdened" to the latter. "Taken" has but one meaning here. In contrast, the term "burdened", especially when used in conjunction with "taken", connotes something other than a taking. Such a construction is consistent with the view, expressed before, that the statute only purports to deal with the situation where the poles were erected

within the right-of-way of the highway and where the only possible damage to the abutting owner was an indirect burden on certain easements.

The statute then, fairly read, does not require the payment of compensation to an abutting owner whose lands "along" a highway are required by a utility company for the purpose of erecting its poles, etc. This surely lends some color to the language of subsection (a) authorizing such companies to exercise a power of eminent domain in erecting their facilities "along any highways". I am satisfied that "along any highways" must be read as referring exclusively to lands lying within the right-of-way, since a construction which would include private lands of the kind involved here would amount to an authorization to such companies by the Legislature to use private property without paying just compensation. Since such a result would be contrary to the Constitution, the court is disposed to favor that construction which does not run afoul of fundamental law.

I therefore conclude that "along any highways" as employed in §901 does not apply to the use of private land abutting upon a public right-of-way. It follows that in placing its poles on private property the plaintiff was not required to obtain the defendant's consent. Under such circumstances plaintiff is

12.

admittedly entitled to just compensation for the compulsory removal of its facilities and a declaratory judgment to that effect will be entered. Since proceedings for the condemnation of private property are exclusively within the jurisdiction of the Superior Court (10 Del. C. §6102), a judicial determination of the extent of the compensable damage to plaintiff must await a hearing in that forum.

Present order on notice.

Appendix J
Figures

Figure 2-1
Boring/Jacking/Push-Augering Layout

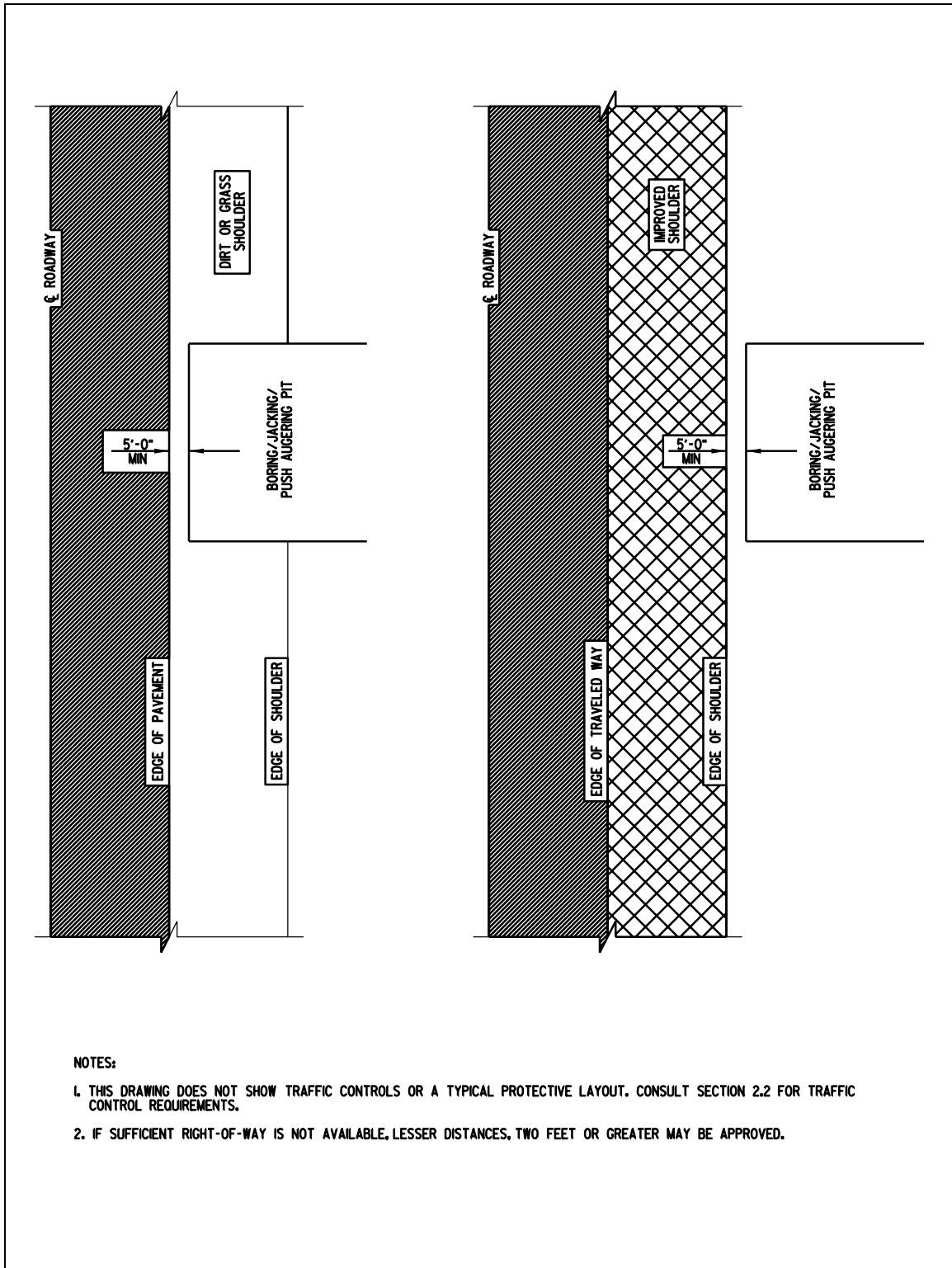


Figure 2-3
Temporary Patch

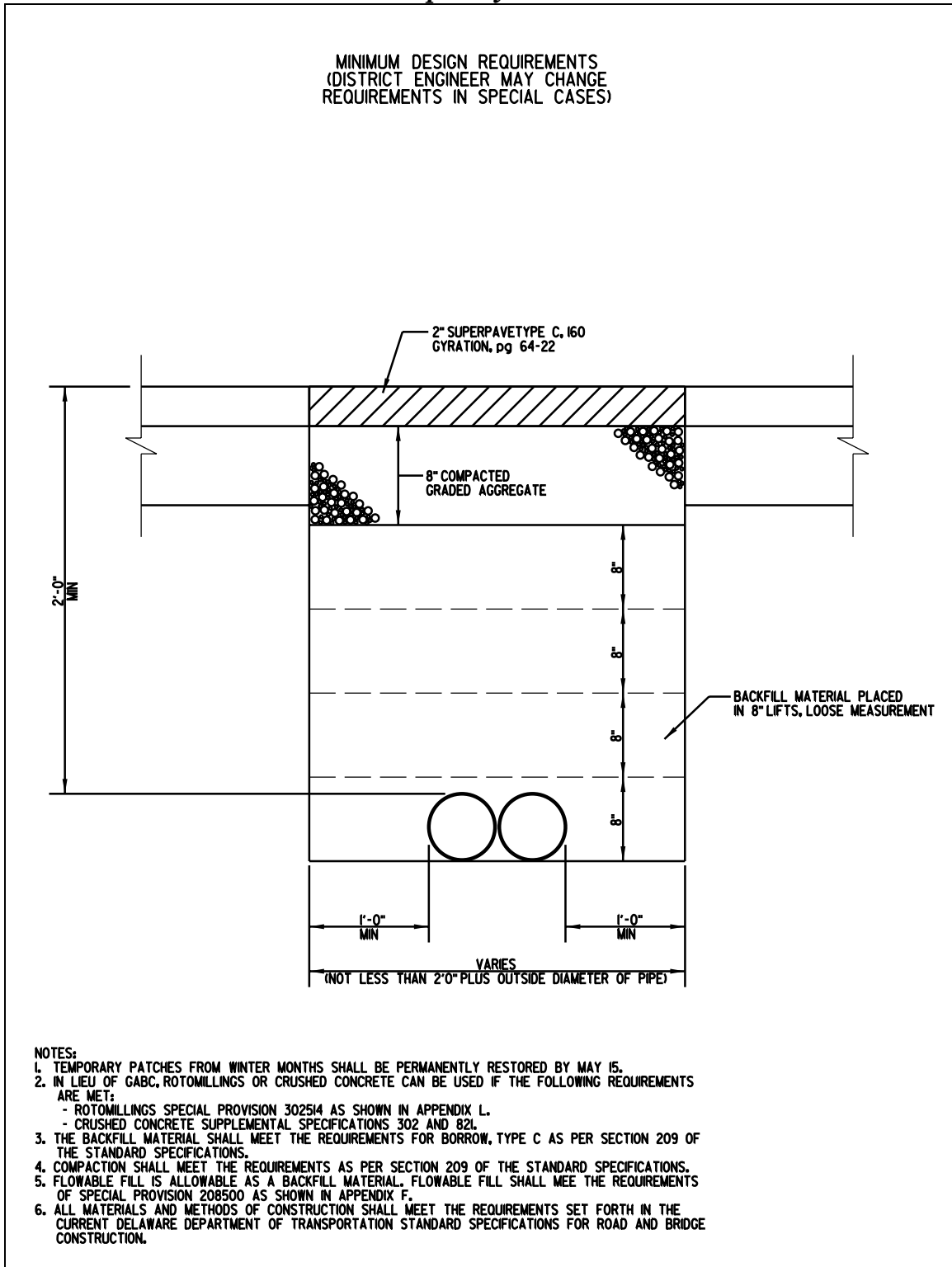


Figure 2-4
Minimum Permanent Cross-Road or Longitudinal Patch For Surface Treatments or Hot Mix Pavements

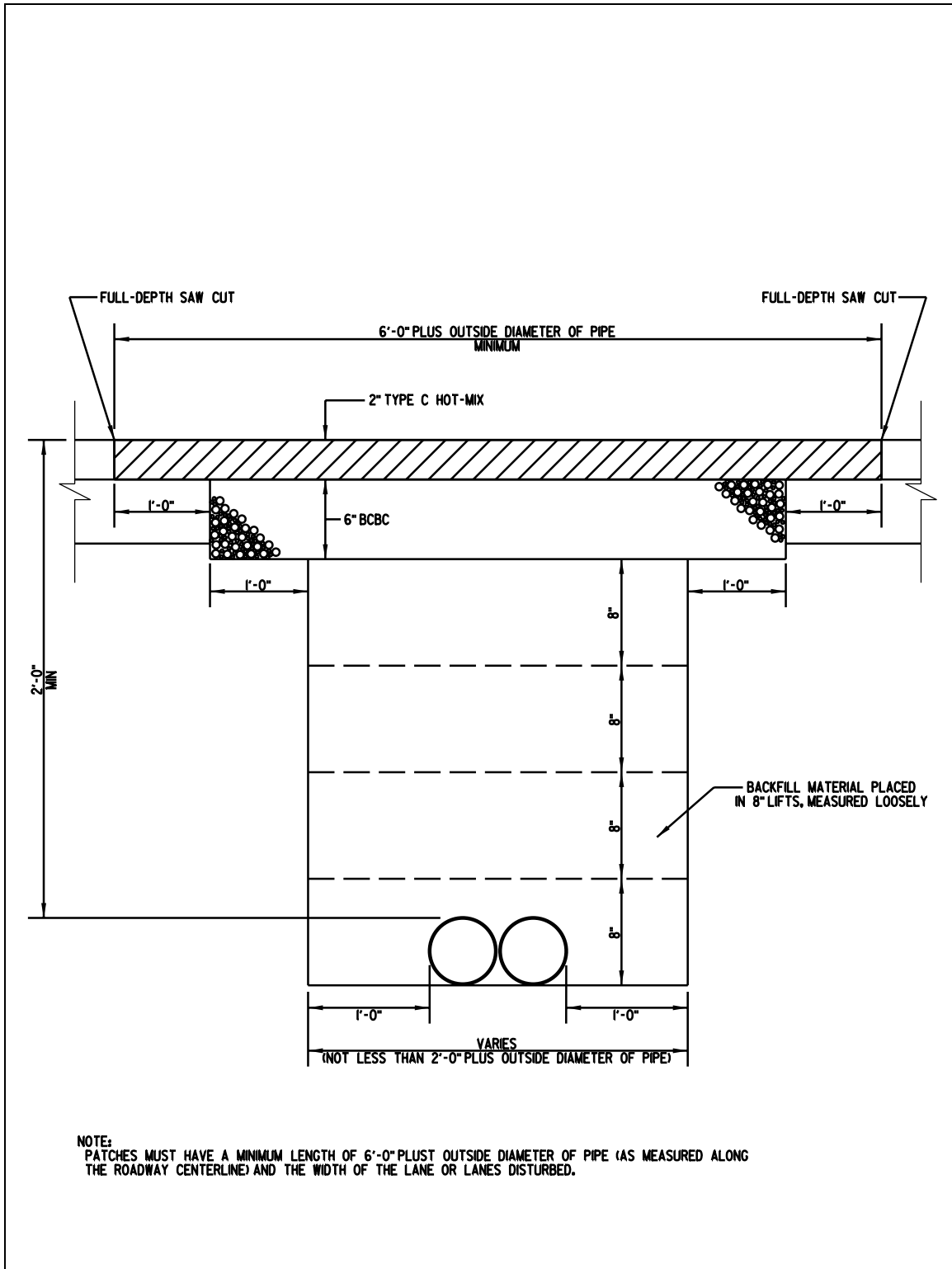
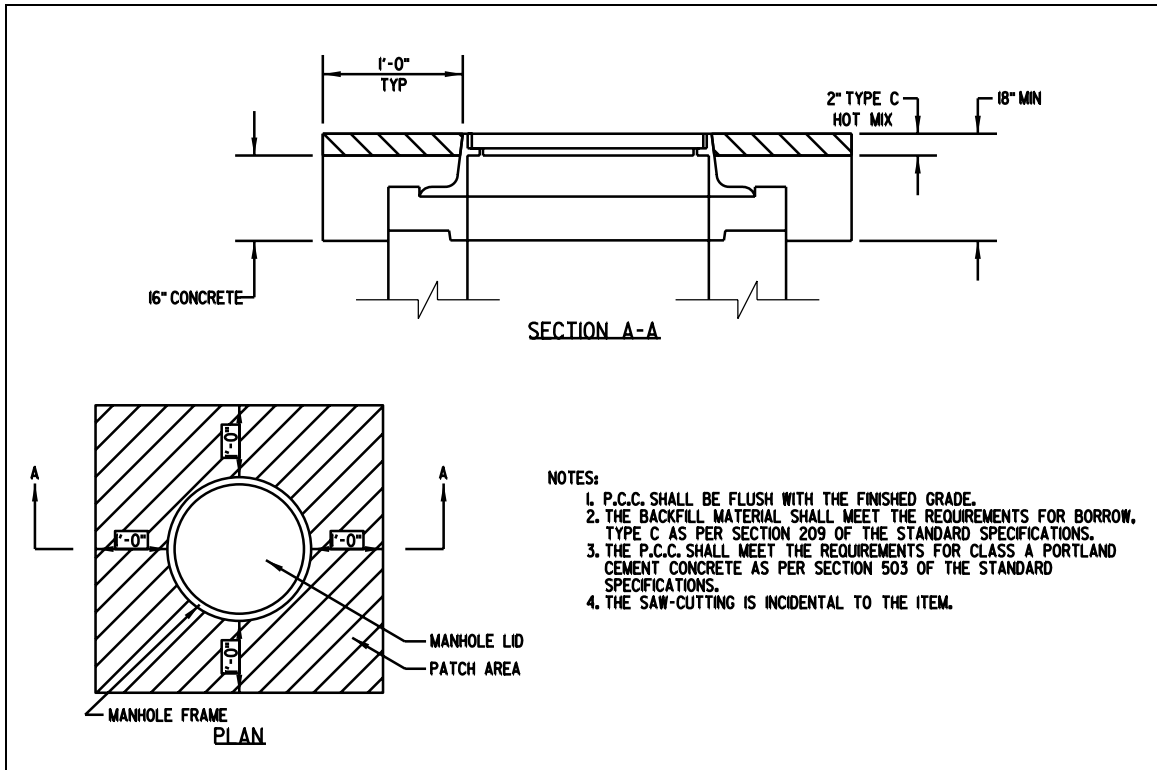


Figure 2-5
Roadway Patching Details at Manholes



Appendix K
Prior Rights Process

**Utility Company
Prior Rights Process**

Step 1: The Utility Company makes a request to retain prior rights and submits recorded deeds with a metes and bounds description and the contact information of the Utility Company's real estate representative. A color-coded plat depicting the metes and bounds of the consumed area(s) clearly marked is prepared.

Step 2: The Utilities Engineer forwards the metes and bounds description to the Team Support Engineer to verify that the description is valid. *(Cover memo from Utilities Engineer to Team Support Engineer, with a cc to Chief of Real Estate and Project Manager, Project Development).*

Step 3: If the metes and bounds description is sufficient and valid, the Team Support Engineer will notify the Utilities Engineer that the prior rights process can move forward. *(Cover memo from Team Support Engineer to Utilities Engineer, with copies to Assistant Chief of Real Estate and Project Manager, Project Development).*

Step 4: The Utilities Engineer coordinates with the design manager from Project Development and the Utility Company to determine what action (i.e. utility remains in current location, relocates within State's right-of-way, or a payment is made for existing easement) is acceptable to all parties.

Step 5: The Utilities Engineer informs the Utility Company that their prior rights will be maintained and stating the agreement that was reached (stay in place, relocate or payment) with the Department. By copy of this correspondence, the Assistant Chief of Real Estate is given a package containing the metes and bounds description, recorded easements, color-coded plat with consumed areas and contact information for the Utility Company's real estate representative. The cover letter serves as direction to the Assistant Chief of Real Estate Section to move forward with the "release of easement" process with the Utility Company if that is the agreement that is reached. *(Send copies of memo to Team Support Engineer and Project Manager, Project Development).*

Step 6: The Assistant Chief of Real Estate sends Prior Rights release document to Utility Company for execution. (*Copy of transmittal letter to Utilities Engineer, Team Support Engineer and Project Manager, Project Development*)

- *During this process the Project Manager, Project Development and Team Support Engineer prepare Right-of-Way plans and consumed easement exhibits (consumed easement, remaining easement, metes and bounds description of consumed area, recording information if applicable). The Team Support Engineer submits a memo with justification and documentation, including an Approved Right-of-Way plat, to Real Estate with copy to Project Development.*

Step 7: Utility Company returns Release of Easement executed agreement.

Step 8: Assistant Chief of Real Estate sends original release of easement to the Office of Recorder of Deeds. (*Copies of the release documents shall be forwarded to the Team Support Engineer and the Utilities Engineer*)

Step 9: Assistant Chief of Real Estate forwards copies of recorded deed and releases to Team Support Engineer with memo requesting preparation of “As Acquired Plans”. (*Utilities Engineer should be copied.*)