

## Division 100 - GENERAL PROVISIONS

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### Division 100

#### SECTION 101 GENERAL INFORMATION, DEFINITIONS, AND TERMS

**101.01 General.** The titles and headings of the Sections, Subsections, and subparts herein are intended for convenience of reference and shall not be considered as having bearing on the interpretation of these Specifications.

Where a publication is referenced, the reference applies to the most recent date of issue as of the date bids are advertised, including interim publications, unless the reference includes a specified date or year.

Portions of these Specifications are written in the imperative mood. In sentences using imperative mood, the subject "the Contractor" is implied. Also implied in the language are "shall" or "shall be" or similar words and phrases. In all instances where "the Contractor" and "shall" or "shall be" are implied, the actions specified are solely the responsibility of the Contractor. In the referenced material sections, the subject may also be a vendor, fabricator, manufacturer, or combination thereof, who may be supplying the material, products, or equipment for the Project. The word "will" generally applies to decisions or actions of the Department or Engineer.

In the Contract as defined in Subsection 101.17, the following words: contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, satisfactory, unsatisfactory, sufficient, insufficient, rejected, condemned, or words with similar intent; mean by or to the Department, subject in each case to the determination of the Secretary, and subject to further review, as permitted by law or permitted elsewhere in these Specifications.

In the Contract, the words "or equal", referring to a product, material, or process, mean "equal as determined by the Department".

In the Contract, the words "as indicated" or "indicated" mean "as indicated or indicated by the Contract".

**101.02 Abbreviations.** Wherever the following abbreviations, terms or pronouns are used in the Contract, the intent and meaning shall be interpreted as follows:

AA	Aluminum Association
AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AED	Associated Equipment Distributors
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ARA	American Railway Association
AREA	American Railway Engineering Association
ARTBA	American Road and Transportation Builders Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
CFR	Code of Federal Regulations
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards
MIL	Military Specifications
MUTCD	Manual on Uniform Traffic Control Devices (For Streets and Highways)
NEC	National Electrical Code
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PTI	Post Tensioning Institute
SAE	Society of Automotive Engineers
SSPC	Steel Structures Painting Council
Traffic Control	Delaware Traffic Control for Streets and Highway Construction, Manual Maintenance, Utility and Emergency Operations
UL	Underwriters' Laboratory, Incorporated

**101.03 Addendum.** Contract revisions issued after advertisement of the proposal and before bid opening.

**101.04 Additional Work.** Work for which a Contract item is already provided by the Contract.

**101.05 Adjustment (or Contract Adjustment).** A revision to the Project cost or time provided in accordance with Subsections 108.07 and 109.04.

**101.06 Advertisement.** A public announcement inviting proposals for work to be performed or material to be furnished.

**101.07 Award.** The Department acceptance of a proposal.

**101.08 Bidder.** Any individual or legal entity submitting a proposal.

**101.09 Bid Documentation.** All writings, working papers, computer printouts, charts, and data compilations that contain or reflect information, data, or calculations used by the bidder to prepare the bid proposal submitted, including but not limited to material relating to the determination and application of:

A. Equipment rates
B. Overhead rates and related time schedules
C. Labor rates
D. Efficiency or productivity factors
E. Arithmetic extensions
F. Subcontractor and material supplier quotations

Any manuals standard to the industry used by the bidder in determining the bid proposal are also considered bid documentation. These manuals may be included in the bid documentation by reference and shall show the name and date of the publication and the publisher.

The term "Bid Documentation" does not include documents provided by the Department for the bidder's use in the preparation of the bid proposal.

**101.10 Bid Proposal.** The bound book consisting of: General Description; General Notices; Supplemental Specifications; Special Provisions including Utility Statements, Certificate of Right-Of-Way Status, and location and environmental requirements; and the Bid Proposal Form.

**101.11 Bid Proposal Form.** The approved form on which the Department requires formal bids to be prepared and submitted for the work.

**101.12 Bridge.** A structure, including supports, erected over a depression or an obstruction, such as water, highway, or railway and having a track or passageway for carrying traffic or other moving loads and having a length measured along the center of the roadway of more than 6.096 m between undercopings of abutments or extreme ends of openings for multiple boxes. Structures having an opening of 1.86 m<sup>2</sup> or greater are included on the Department bridge inventory.

**101.13 Calendar Day.** Each and every day shown on the calendar, beginning and ending at midnight.

**101.14 Change Order.** A written order issued by the Engineer to the Contractor for a change to the Contract. Changes to the Contract are extra work, increases or decreases in Contract item quantities, or alterations to the Contract, and are within the scope of the Contract. A change order also establishes the basis and amount of payment for the change to the Contract and provides for any time extension necessitated by the change to the Contract.

**101.15 Channel.** A natural or artificial water course.

**101.16 Completion.** Completion of the Project occurs when the work has been satisfactorily concluded under the Contract and the Contractor has satisfactorily executed and delivered to the Engineer all documents, certificates, and proofs of compliance required by the Contract.

**101.17 Contract.** The written Agreement between the Department and the Contractor setting forth the obligation of the parties for the performance of the work.

The Contract may include, but is not limited to, the advertisement, bid proposal, Agreement, Contract form; proposal, performance, payment, and other bonds or guaranties; Specifications; working drawings; general and detailed plans; all required notices with respect to any of the foregoing; change orders; supplemental agreements; and Engineer's written directives. The Contract shall not be modified, altered, or otherwise changed by any oral promise, statement, or representation made either by the Department or Contractor, unless such modification, alteration, or change is reduced to writing in accordance with the Contract.

**101.18 Contract Item (Pay Item).** A specifically described item of work for which a price is provided in the Contract.

**101.19 Contract Payment and Performance Bond.** The security furnished by the Contractor and the Contractor's surety or sureties to guarantee payment and performance of all obligations incurred by the Contractor on any Contract.

**101.20 Contract Time.** The number of working days or number of calendar days allowed for the substantial completion of the Contract. When a calendar date of completion is specified, the work shall be substantially completed on or before that specified completion date. Calendar day contracts shall be completed on or before the day indicated even when that date is Saturday, Sunday, or holiday.

**101.21 Contractor.** The individual or legal entity contracting with the Department for performance of the work.

**101.22 County.** The county in which the work is to be performed.

**101.23 Culvert.** Any structure which provides an opening under any roadway, but is not classified as a bridge.

**101.24 Days.** Days as used in the Contract means calendar days.

**101.25 Department.** Delaware Department of Transportation.

**101.26 Differing Site Conditions.** Subsurface or latent physical conditions encountered at the site that, 1) differ materially from those indicated in the Contract, or are 2) unknown physical conditions of an unusual nature, differing materially from those conditions ordinarily encountered and generally recognized as inherent in the work provided for in the Contract.

**101.27 District.** Subdivisions of the Department for the purpose of management, construction, and maintenance.

**101.28 District Engineer.** The Engineer in charge of a district of the Department.

**101.29 Easement.** A right acquired by public authority to use or control property for a designated transportation purpose.

**101.30 Embankment.** A structure constructed of material as described in Section 202, between the existing ground and subgrade.

**101.31 Engineer.** The Chief Engineer of the Department, acting directly or through an assistant or other authorized representative responsible for engineering and administrative supervision of the Contract.

**101.32 Equipment.** All machinery, tools, and apparatus, together with necessary supplies for upkeep and maintenance necessary for the construction and completion of the Contract.

**101.33 Extra Work.** Work not included in the Contract, but within the scope of the Contract and desired by the Engineer for the satisfactory completion of the Contract.

**101.34 Falsework.** Any temporary construction work used to support the weight of a permanent structural element until it becomes self-supporting. Falsework would include steel or timber beams, girders, columns, piles and foundations, and any proprietary equipment including modular shoring frames, post shores, and adjustable horizontal shoring.

**101.35 Force Account.** Prescribed work paid on the basis of actual costs and appropriate additives.

**101.36 Formwork.** A temporary structure or mold used to retain the plastic or fluid concrete in its designated shape until it hardens. Formwork must have enough strength to resist the fluid pressure exerted by plastic concrete and any additional fluid pressure effects generated by vibration.

**101.37 Final Inspection.** The inspection, conducted by the Engineer, to determine if the Project, or any substantial portion thereof, has been satisfactorily completed, in accordance with Contract requirements.

**101.38 General Notices.** Federal and State regulations contained in the bid proposal which govern Contract operations.

**101.39 Holidays.** The following days shall be considered legal holidays in the State of Delaware.

A. New Years Day
B. Martin Luther King's Birthday
C. President's Day
D. Good Friday
E. Memorial Day
F. Independence Day
G. Labor Day
H. Columbus Day
I. General Election Day (biennial)
J. Return Day (Sussex County only after 12:00 Noon)
K. Veteran's Day
L. Thanksgiving Day
M. Friday after Thanksgiving
N. Christmas Day

If any additional days are designated as legal holidays for State employees by Executive Order of the Governor, and the Contractor chooses to honor the days by not working, the State will extend the Contract time accordingly. If any holiday falls on Sunday, the Monday following shall be the holiday. If any holiday falls on Saturday, the Friday preceding shall be the holiday.

**101.40 Inspector.** An authorized representative of the Engineer assigned to make detailed inspections of the material or work to determine compliance with the Contract.

**101.41 Invitation for Bids.** The advertisement for proposals for work or materials on which bids are requested. The advertisement will indicate with reasonable accuracy the quantity and location of the work to be performed and the time and place of the opening of proposals.

**101.42 Laboratory.** The Department testing laboratory or any other testing laboratory designated by the Engineer.

**101.43 Limits of Construction.** An area with established boundaries, identified within the right-of-way or easements, where the construction is permitted. When not specifically identified, limits of construction shall be the right-of-way and easement.

**101.44 Liquidated Damages.** An amount due and payable to the Department by the Contractor for additional costs incurred by the Department resulting from the Contractor's failure to complete within the Contract time.

**101.45 Lump Sum.** The single price submittal by a Contractor as a single amount for a complete Contract item.

**101.46 Major and Minor Contract Items.** Any Contract item having an original value in excess of 10% of the original Contract amount is a major item. All other original Contract items are considered minor.

**101.47 Materials.** Any substances other than equipment used in the construction of the Project.

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

**101.49 Notice of Award.** A written notice to the selected bidder stating that the bid proposal has been accepted by the Department and that the selected bidder is required to execute the Contract Agreement and furnish Performance and Payment bonds satisfactory to the Department.

**101.50 Notice to Contractors.** The official notice stating the time and place for the submission of bid proposals.

**101.51 Notice to Proceed.** Written notice to the Contractor to begin the Contract work. When applicable, the notice will include the starting date of Contract time.

**101.52 Pavement Structure.** The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load.

A. <i>Base Course.</i> The layer or layers of specified or selected material of designated thickness placed on a subbase or a subgrade to support a surface course.
B. <i>Subbase.</i> One or more layers of specified material thickness placed on a subgrade to support a base course (or in the case of rigid pavement, the Portland cement concrete slab).
C. <i>Subgrade.</i> The top surface of the roadbed upon which the pavement structure is constructed.
D. <i>Subgrade Treatment.</i> Modification of roadbed material by stabilization.
E. <i>Surface Course.</i> Layer(s) of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate. The top layer is sometimes called the "Wearing Course".

**101.53 Pay Item** - See Contract item.

**101.54 Plans.** The approved Contract plans, typical sections, and supplemental drawings, or exact reproductions thereof, which show the location, character, dimension, and details of the work to be done, and which are considered a part of the Contract supplemental to these Specifications.

**101.55 Profile Grade.** The trace of a vertical plane intersecting the top surface, usually along the longitudinal centerline of the surface course. Profile grade means elevation of such trace.

**101.56 Project.** The specific section of highway or other public improvement together with all appurtenances and construction to be performed thereon under the Contract. The Project may include work by others under other contracts.

**101.57 Project Resident.** The field representative of the Engineer having direct supervision of the administration of the Contract.

**101.58 Proposal.** A written offer by a bidder on Bid Proposal Forms furnished by the Department to perform the work.

**101.59 Proposal Guaranty.** The security furnished with a proposal to ensure that the bidder will enter into the Contract if the Contract is awarded.

**101.60 Responsive Bid.** A proposal that complies with all requirements of the invitation for bids.

**101.61 Responsible Bidder.** A bidder determined by the Department to possess the potential to perform the Contract work.

**101.62 Right-Of-Way.** A general term denoting land, property, or interest therein possessed by the Department.

**101.63 Roadbed.** The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

**101.64 Roadside.** The areas between the outside edges of the shoulders and the right-of-way boundaries. Unpaved median areas between inside shoulders of divided highways and infield areas of interchange are included

**101.65 Roadside Development.** Those items necessary for the preservation or replacement of landscape materials and features that may include suitable plantings and other improvements or ground cover to preserve and enhance the appearance and stability of the highway right-of-way or acquired easements for scenic improvements.

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

**101.67 Scaffolding.** An elevated work platform used to support workers, materials, and equipment, but not intended to support the structure.

**101.68 Schedule of Items.** The list of Contract items of work in the rear of the proposal on which bidders submit their bid prices.

**101.69 Schedule of Work.** The approved progress schedule submitted by the Contractor containing dates of commencement and completion of the various items of work within the Contract time.

**101.70 Secretary.** Secretary of the Department of Transportation of the State of Delaware.

**101.71 Section.** When referring to the Specifications, a numbered article or group of related articles forming a part of the Specifications.

**101.72 Shoulder.** The portion of the right-of-way adjacent to the traveled way for accommodation of stopped vehicles for emergency use, and for lateral support of the pavement structure.

**101.73 Sidewalk.** That portion of the road primarily constructed for the use of pedestrians.

**101.74 Specifications.** The compilation of provisions and requirements for the performance of the prescribed work.

A. <i>Standard Specifications.</i> A book of specifications approved for general application and repetitive use.
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B. <i>Supplemental Specifications.</i> Approved additions and revisions to the Standard Specifications, which is part of the bid proposal.
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C. <i>Special Provisions.</i> Special directions, provisions, or requirements particular to the Project not otherwise detailed in the Standard or Supplemental Specifications.
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**101.75 Standard Construction Details.** Drawings of standard details of construction which have been adopted by the Department for miscellaneous items of work and are a part of the bid proposal.

**101.76 State.** The State of Delaware.

**101.77 Structures.** Bridges, culverts, storm sewer appurtenances, slope and retaining walls, sign support structures, and other similar items.

**101.78 Subcontractor.** An individual or legal entity contracting with the Contractor to perform any part of an item of work of the Contractor's contract with the Department.

Exceptions to this definition are suppliers limited to delivering and depositing, but not incorporating material, and the work performed as maintenance which does not advance the completion of the Contract and is not considered as an item of work.

**101.79 Substantial Completion.** The point at which all Contract items are complete and accepted excluding any warranties or vegetation growth.

**101.80 Substructure, Bridge.** All of the structure below the bearings of simple and continuous spans, skewbacks of arches, and tops of footings of rigid frames, including backwalls, and wingwalls.

**101.81 Superintendent.** The Contractor's authorized representative in responsible charge of the work.

**101.82 Superstructure, Bridge.** Approach slabs and the entire structure except the substructure.

**101.83 Supplemental Agreement.** A written agreement signed by the Department and the Contractor for the performance of work which is beyond the scope of the original Contract, but which the Department elects to perform in conjunction with the existing Contract.

**101.84 Surety.** The legal entity or individual other than the Contractor, authorized to do business in the State, executing a bond furnished by the Contractor.

**101.85 Town or City.** A subdivision of the State used to designate or identify the location of the proposed work.

**101.86 Traveled Way.** The portion of the right-of-way designated for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

**101.87 Unbalanced Bid, Materially.** A proposal that generates a reasonable doubt that award to the bidder submitting a mathematically unbalanced bid will result in the lowest ultimate cost to the Department.

**101.88 Unbalanced Bid, Mathematically.** A proposal containing Contract items that do not reflect reasonable actual costs plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs.

**101.89 Unit Price.** The price provided by the Contractor in the proposal for a Contract item.

**101.90 Work.** The furnishing of all labor, materials, equipment, and other incidentals necessary to complete the Contract.

**101.91 Working Day.** Any calendar day, except: 1) Saturdays, Sundays, and holidays; 2) days where conditions identified in the Contract require the Contractor to suspend construction operations; 3) days with inclement weather that prevent prosecution of the scheduled work; 4) days from December 16 to March 15 inclusive. On inclement weather days that result in partial prosecution of the work, partial working days will be charged as determined by the Engineer. Partial working days will be charged in one-quarter day increments. If the Contractor receives permission from the Engineer to work on any Sunday or holiday, full working days will be charged, weather permitting. No time charge will be assessed if the Contractor elects to work on Saturdays. Should the Contractor prepare to begin work on any day on which inclement weather prevents the work from beginning at the usual starting time and the crew is dismissed as a result, the Contractor will not be charged for a working day whether or not conditions change during the day and the rest of the day becomes suitable for construction operations.

**101.92 Working Drawings.** Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor is required to submit to the Engineer for approval.

## SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

**102.01 Registration of Bidders.** Prospective bidders must obtain registration status prior to submitting a proposal. In order to obtain registration status, prospective bidders must provide the Department with the following information:

- A. Legal title, address, Federal Employer Identification Number, and phone number of organization.
- B. Type of organization (corporation, partnership, etc.).
- C. If organization is a corporation, name the parent company and all subsidiary or affiliated companies, if applicable, and list all stockholders who own shares of stock equal to or more than 10% of the organization's stock.
- D. List the name and title of corporate officers authorized to sign Contract documents, change orders, estimates, and other pertinent Contract forms.

Upon receipt of this information, the prospective bidder will be listed on the Department's Registry of Highway/Bridge/Building/Construction Contractors. Contractors registered on the Department's registry will receive mailed notification of all public works contracts advertised by the Department. It is the responsibility of all registered contractors to provide the Department on a continuous basis any changes to the information contained in the registry. Failure to provide current information may result in the loss of bidding privileges.

**102.02 Contents of Proposal.** The proposal will state the location and description of the contemplated construction, show the estimate of the various pay item quantities, and show the kinds of work to be performed or materials to be

furnished. A schedule of items for which unit prices are invited will be included along with the specified time in which the work must be completed, amount of the proposal guaranty, and the date, time, and place of the opening of bid proposals. If the basis of proposal comparisons by the Department is to be other than total cost, the comparison basis to be used will be defined. The bid proposal will also include or designate any Supplemental Specifications, Special Provisions, and any other specifications or requirements that vary from or are not contained in the Standard Specifications.

All papers bound with or attached to the bid proposal are considered as part of the proposal. The Plans, Specifications, and other documents designated in the bid proposal will be considered a part of the proposal whether attached or not.

**102.03 Issuance of Proposal.** The Department reserves the right to refuse to issue a proposal to a bidder for any of the reasons stated in Subsection 102.12.

The prospective bidder will be required to pay the Department a non-refundable sum stated in the advertisement for each copy of the proposal.

Bid proposals without plans, marked "Duplicate", will be made available at a cost established by the Department. Such "Duplicates" are not valid for use in the submission of bids.

**102.04 Interpretation of Quantities in Bid Proposal Form.** The quantities appearing in the Bid Proposal Form are estimates used for the bid comparison. Payment to the Contractor will be made for the actual quantities of work performed and accepted, or for materials furnished in accordance with the Contract. The estimated quantities of work to be done and materials to be furnished may be increased, decreased, or eliminated in their entirety.

**102.05 Examination of Plans, Specifications, Bid Proposal, and Site of Work.** The bidder is required to examine the site of the proposed work, the bid proposal, and all items designated in the bid proposal before submitting a proposal. If no site investigation is performed, the bidder assumes responsibility for all site conditions that should have been discovered had a reasonable site investigation been performed. The submission of a proposal will be considered conclusive evidence that the bidder is aware of and accepts the conditions to be encountered in performing the work and the requirements of the proposed Contract.

Boring logs and other records of subsurface investigations, when such investigations have been performed, are available for inspection by bidders. It is understood that such information was obtained and used for Department design and estimating purposes only. They are made available to bidders so that all bidders have access to subsurface information identical to that available to the Department and to other bidders, and are not intended as a substitute for the personal investigation, interpretations, and judgment of the bidders.

The Department will not be bound by any statement or representation concerning conditions or descriptions of the work unless they are included or designated in the bid proposal. Oral explanations or instructions given before the bid of the Contract by Department employees or agents will not be binding.

Any request for explanation of the meaning or interpretation of the proposal or items designated in the bid proposal shall be submitted, in writing, to the administrative manager no less than six business days prior to the proposal opening date. Interpretations or explanations made by the Department in response to such requests will be issued as an addendum to the bid proposal, and will be furnished to all prospective bidders in writing before the time set for opening of the proposals.

**102.06 Preparation of Proposal.** The bidder shall submit the proposal on the Bid Proposal Forms provided. The Bid Proposal Forms shall be detached from the bid proposal. Specify a unit price in words and figures for each Contract item for which a quantity is given and show the product of the respective unit price and quantities written in figures in the column provided. The total amount of the proposal is to be obtained by adding the amounts of the several Contract items. The words and figures shall be in ink or typed. In case of a discrepancy between the prices written in words and those written in figures, the prices written in words shall govern.

When the proposal permits an alternate to be used by the bidder, the bidder shall indicate on the Bid Proposal Form the alternate that is the basis of the bid submitted.

All Department addenda to the bid proposal must be acknowledged in the certification and shall be submitted with the modified Bid Proposal Forms. The proposal submitted must be signed in ink by a representative of the bidder authorized

to execute proposals. The name and address of the individual signing the proposal is to be provided as well as the following names and addresses as applicable:

<u>Type of Bidder</u>	<u>Names and Office Addresses Required</u>
Individual	Individual
Partnership	Each member of the partnership
Joint Venture	Each member or officer of firms represented in the joint venture
Corporation	Corporation officer, corporation name, and corporate address

Bid proposals and Bid Proposal Forms are serially numbered and are not transferable. Unless otherwise provided in the proposal, joint ventures may submit a proposal for a joint venture of bidders qualified for that project on a bid proposal issued to the joint venture or on a bid proposal issued to any one of the joint participants. The proposal must be signed by each covenant followed by the title "Joint Venturer".

**102.07 Irregular Proposals.** Proposals shall be considered irregular and shall be rejected as non-responsive for any of the following reasons:

- A. The proposal is on a form (or in a format if computer generated) other than that approved by the Department, or if the form is altered or any part detached or incomplete.
- B. There are unauthorized additions, conditional bids, or irregularities of any kind that may tend to make the proposal incomplete, indefinite, or ambiguous.
- C. The bidder adds provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- D. The proposal does not contain a unit price for each Contract item listed except in the case of authorized alternate pay items.
- E. The proposal does not include the bid documentation in a sealed container and the affidavit of bid documentation if required by the Contract.
- F. The proposal is materially unbalanced.
- G. The proposal is not properly signed.
- H. The proposal is not typed or completed in ink.
- I. The Contractor fails to provide a properly executed proposal guaranty.
- J. The bidder fails to sign the non-collusive bidding certification.
- K. The proposal fails to comply with any other material requirements of the invitation for bids.

**102.08 Proposal Guaranty.** All bids shall be accompanied by a deposit of either a good and sufficient bond to the State for the benefit of the agency involved, with a corporate surety authorized to do business in this State or a security of the bidder assigned to the Department. The form of the bond and the surety to be used, must be approved by the Department. The sum of the proposal guaranty must be equal to at least 10% of the bid. The bid bond need not be for a specific sum, but may be stated to be for a sum equal to 10% of the bid to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10% of the bid. "Securities" shall include certified checks, cashier's checks, treasurer's check, and other negotiable or transferable instruments evidencing an unconditional debt to the State or Department.

**102.09 Delivery of Proposals.** The proposal shall be placed in the sealed envelope provided, and plainly marked to indicate its contents, including the Contract designation and the name and address of the bidder. Proposals shall be delivered prior to the time and place specified in the advertisement. Bidder bears the risk of delays in delivery. Proposals received after the specified time will be returned to the bidder unopened. Proposals forwarded by the United States Postal Service or other delivery service must be addressed as follows:

Administrative Manager  
Office of Administration  
Department of Transportation  
P.O. Box 778  
Dover, DE 19903-0778

OR

Administrative Manager  
Office of Administration  
Department of Transportation  
800 Bay Road  
Dover, DE 19901

**102.10 Withdrawal or Revision of Proposals.** A bidder may withdraw or revise a proposal after it has been delivered to the Department, provided the request for withdrawal or revision is received by the Department in writing or in person with proper identifications before the time set for receipt of proposals. When the proposals have been read, any low bidder may withdraw any other unopened proposal which it may have submitted for another contract. Any bidder exercising the privilege of so withdrawing its bid or bids waives all claims that may arise should it be found that its opened proposal is irregular or for any reason is unacceptable to the Department.

**102.11 Public Opening of Proposals.** Proposals will be opened and read publicly at the place and time set for opening of proposal.

**102.12 Disqualification of Bidders.** Any of the following reasons may be considered sufficient for the disqualification of a bidder and the rejection of a proposal for future work until reinstated as a registered bidder.

1. The bidder has defaulted on previous contract(s).
2. Unsatisfactory past performance evaluations(s) as determined and documented by the Department.
3. Failure to submit required Contract release documents, such as Certification of Payment (CN-91), Release of Contractor (CN-102), Release of Subcontractors (CN-103), Statement of Materials and Labor Used by Contractors on Highway Construction Involving Federal Funds (FHWA 47), or failure to sign a contract final change order for completed contracts.

The Department requires all releases within 90 calendar days after the date of the final change order or date of the acceptance of the Contract, whichever is later, or within 30 calendar days following the resolution of any Contract claims.

**102.13 Rejection of Proposal.** Any of the following reasons may be considered sufficient for the rejection of a proposal.

- A. More than one proposal for the same work from an individual, firm, or corporation under the same or different name.
- B. Participants in collusion among bidders.
- C. Uncompleted work which, in the judgement of the Department, might hinder or prevent the timely completion of further work, if awarded.
- D. Failure to pay or satisfactorily settle all bills due for labor and materials on contracts current at the time of bidding.

**102.14 Materials Guaranty.** The successful bidder may be required to furnish a complete statement of the origin, composition, and manufacture of materials used in the construction of the work, together with a sample to be tested for conformance with the Contract provisions.

**102.15 Non-Collusive Bidding Certification.** Every proposal submitted to the Department shall contain the following statement subscribed to and affirmed by the bidder as true under the penalties of Law. This statement, in the form of a certification, shall be signed by the bidders and submitted with the bid documents.

#### ***Non-Collusive Bidding Certification***

*By submission of this proposal, each bidder and each person signing on behalf of any bidder, certifies as to its own organization, under penalty of perjury, that to the best of each signer's knowledge and belief:*

- 1. The prices in this proposal have been arrived at independently without collusion, consultation, communication, or Agreement with any other bidder or with any competitor for the purpose of restricting competition.*
- 2. Unless required by law, the prices which have been quoted in this proposal have not been knowingly disclosed and will not knowingly be disclosed by the bidder, directly or indirectly, to any other bidder or competitor prior to the opening of proposals.*

3. *No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.*

A bid proposal will not be considered for award nor will any award be made where there has not been compliance with 1., 2., and 3. above.

If the bidder cannot make the foregoing certification, the bidder shall so State and shall furnish with the proposal a signed statement which sets forth in detail the reasons why the certification cannot be made. Where 1., 2., and 3. above have not been complied with, the proposal will neither be considered for award nor will any award be made unless the Department determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder has 1) published price lists, rates, or tariffs covering items being procured, 2) informed prospective customers of proposed or pending publication of new or revised price lists for such items, or 3) sold the same items to other customers at the same prices being bid does not constitute a disclosure within the meaning of 1. above.

## SECTION 103 AWARD AND EXECUTION OF CONTRACT

**103.01 Consideration of Bids.** After the proposals are opened and read, the Department will compare the proposals on the basis of the summation of the products of the quantities and the unit prices unless otherwise defined in the bid proposal. The results of the comparison will be available to the public upon award of the Contract. In the event of a discrepancy between unit prices and extensions, the unit price shall govern. The Department reserves the right to reject proposals, waive technicalities, proceed to do the work otherwise, or advertise for new proposals. Unit bid prices may also be affected by maximum price provisions noted elsewhere in these Specifications.

**103.02 Award of Contract.** The award of the Contract will be made within 30 days after the opening of the proposals to the responsible bidder who submits the lowest responsive proposal. The successful bidder will be notified in writing, mailed to the address indicated on the proposal, of the acceptance of the proposal and the award of the Contract. By mutual consent, the Department and the lowest responsible bidder can agree to extend the time within which the Department may make an award.

**103.03 Cancellation of Award.** The Department reserves the right to cancel the award of any contract before execution without liability.

**103.04 Return of Proposal Security.** Proposal securities, except that of the lowest two bidders, will be returned within 30 days following the opening of the bid proposals. The retained proposal guaranties of the two lowest bidders will be returned after a satisfactory Contract performance and payment bond has been furnished and the Contract has been executed. A Contractor will not be released from this obligation because of an alleged error in the preparation of the proposal unless the Department retains the proposal guaranty.

**103.05 Performance and Payment Bonds.** Simultaneous with the execution of the Contract, the successful bidder shall furnish a surety bond or bonds in a sum equal to 100% of the Contract price to the State. The bond shall be for the benefit of the Department, as well as for the use and benefit of the Division of Revenue of the State in the case of claims under this bond for any and all taxes due to the State. The bond shall be issued by a corporate surety authorized to do business in this State.

The Contractor shall on a form provided by the Department obtain a release from the Division of Revenue indicating that all tax obligations for the Division of Revenue have been satisfied. This form shall be presented to the Department as a condition for the release of bond.

The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the Contract, at the time and in the manner prescribed by the Contract, including the payment in full to every person furnishing material or performing labor or services in the performance of the Contract, of all sums of money due the Contractor for such labor, services, or material. The bond shall also contain the successful bidder's guarantee to indemnify and save harmless the State and the Department from all costs, damages, and expenses growing out of or by reason of the successful bidder's failure to comply and perform the work and complete the Contract in accordance with the Contract.

The bond shall provide that every person furnishing materials or performing labor for the successful bidder under the Contract may maintain an action on the bond for its own use in the name of the State in any court of competent jurisdiction, for recovery of such sum or sums of money as may be due the person from the successful bidder. The form of such bond shall be provided by the Department and the surety must be acceptable to the Department.

**103.06 Execution and Approval of Contract.** The successful low bidder shall return the signed Contract and Contract bond to the Department within 20 days after the notice that the Contract has been awarded. If the Contract is not executed by the Department within 15 days following receipt of the signed Contracts and bonds, the bidder has the right to withdraw the bid without penalty. The Contract will not be considered effective until it has been fully executed by all parties to the Contract.

Prior to the execution of the Contract, provide proof of compliance with the requirements of Sections 2502 and 2503, Chapter 25, Title 30 of the Delaware Code. If the successful bidder is a non-resident corporation, provide proof of compliance with the requirements of Subchapter XIV of Title 8 of the Delaware Code, and as further amended at the time of bid.

**103.07 Failure to Execute Contract.** Failure by the successful bidder to execute the Contract and file an acceptable bond within 20 days after the notice of award shall be considered a revocation of the notice of award and forfeiture of the proposal guaranty to the Department. Contract award may then be made to the next lowest responsive bidder or the work may be readvertised.

**103.08 Escrow of Bid Documentation.** If required by the Special Provisions, submit to the Department legible copies of the bid documentation.

- A. *Scope and Purpose.* The purpose of escrowing the bid documentation is to preserve the Contractor's bid documents for use by the Contractor and the Department in the resolution of any disputes, claims, arbitration proceeding, or litigation arising from this Contract. The submitted bid documentation shall be placed in escrow with a banking institution and preserved by that institution as specified in the following Subsections of this Section.
- B. *Submittal and Return of Bid Documentation.* Within 24 hours of the execution of the Contract, the Contractor shall submit the bid documentation in a sealed container as per the custody Agreement form. The container shall be clearly marked "Bid Documentation" and shall show on the face of the container the Contractor's name and address, the date of submittal, the Contract number, and the Project designation.
- C. *Affidavit.* In addition to the bid documentation, submit an affidavit, signed under oath by a representative of the Contractor authorized to execute bidding proposals, listing each bid document submitted by author, date, nature, and subject matter. The affidavit shall attest that 1) the affiant has personally examined the bid documentation, 2) the affidavit lists all of the documents relied upon by the Contractor in preparing its proposal for the Project, and 3) all such bid documentation is included in the sealed container submitted to the Department.
- D. *Duration and Use.* The Department and the Contractor will jointly deliver the sealed container and affidavit to a banking institution or other bonded document storage facility selected by the Department for placement in a safety deposit box, vault or other secure accommodation. The document depository Agreement shall reflect that the bid documentation and affidavit will remain in escrow during the life of the Contract or until the Contractor and the Department jointly agree to remove such documentation, or the Contractor notifies the Department of intention to file a claim or initiate litigation against the Department related to the Contract. Notification of the Contractor's intention to file a claim or initiation of litigation against the Department will be sufficient grounds for the Department to obtain the release and custody of the bid documentation. If the bid documentation is not removed from escrow, upon completion of the Contract and provided that the Contractor has signed the final Standard Release Form, the Department will instruct the document depository to release the sealed container to the Contractor. In accordance with the Contractor's representation that the sealed container placed in escrow contains all of the materials relied upon in preparing its proposal, the Contractor agrees to waive the right to use any bid documentation other than that placed in escrow to resolve all disputes arising out of the Contract.
- E. *Refusal or Failure to Provide Bid Documentation.* Failure to provide bid documentation will render the proposal non-responsive, and the proposal guaranty will be forfeited in accordance with Subsection 103.07.
- F. *Confidentiality of Bid Documentation.* The bid documentation and affidavit in escrow are, and will remain, the property of the Contractor. The Department has no interest in, or right to, the bid documentation unless mutually agreed by the Contractor and the Department or upon notification of the intention to file claim is received or litigation ensues between the Department and Contractor. In the event of such notification or litigation, the bid documentation and affidavit shall become the property of the Department until complete resolution of the claim or litigation is achieved. These materials, and all copies made by the Department, shall be returned to the

Contractor upon execution of a final release. The Department shall make every reasonable effort to ensure that the bid documentation it has gained access to will remain confidential within the Department and will not be made available to anyone outside the Department or used by a former Department employee.

- G. *Cost and Escrow Instructions.* The cost of the storage of bid documents will be borne by the Department. The Department will provide escrow instructions to the document depository consistent with this clause.
- H. *Payment.* There will be no separate payment for the cost of compilation of data, the sealed container, or verification of the bid documentation. All costs shall be included in the Contract bid price.

## **SECTION 104 SCOPE OF WORK**

**104.01 Intent of Contract.** The Contractor shall complete the work described, furnishing all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the Contract.

**104.02 Signs.** The Contractor shall, with the Engineer, inventory all signs (i.e., Traffic, Bus Stops, Street Names, etc.) within the limits of the Contract. Necessary bus stops and traffic signs shall be maintained in operation during construction, and all other signs shall be properly stored. The Contractor is responsible for any loss or damage to signs.

**104.03 Bus Stops.** Bus stops shall be maintained as close as possible to the original location by use of temporary roadway materials during construction activity.

**104.04 Accident Notification.** Notify the appropriate police agency and District Engineer immediately concerning any accidents which result in damage to property or cause personal injury.

**104.05 Changes in the Character of Work.** The Department reserves the right to, at any time prior to the completion of the Contract, issue plan revisions, make adjustments in Contract item quantities, or make such other alterations considered necessary to satisfactorily complete the Contract. A change will also be considered to have occurred when a major item of work, as defined elsewhere in the Contract, is increased in excess of 125% or decreased below 75% of the original Contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125% of original Contract item quantity, or in case of a decrease below 75%, to the actual amount of work performed.

- A. Such changes will be issued in writing by the Engineer.
- B. Such changes do not invalidate the Contract or release the Contract surety.
- C. If as a result of such changes the Contractor requires additional time to complete the Contract, adjustments in the Contract time will be made under Subsection 108.07.
- D. Payment for changes will be made as provided in Subsection 109.03 or 109.04. Payment shall exclude any amount for loss of anticipated profits alleged to result from the change.
- E. Adjustments to the unit price of a Contract item based on increases or decreases in Contract quantities will be considered only on major items and then only for the increase in excess of 125% or decrease below 75% of the original bid quantity. The increase or decrease in the unit price of a Contract item shall apply only to that portion in excess of 125% of the Contract quantity. In cases of a decrease below 75% of Contract quantity, the increase and decrease in the unit price shall apply to the entire quantity. The amount of the increase or decrease in the unit price will be determined in accordance with Subsection 109.04.
- F. When payment for the Contract work cannot be agreed upon by the Contractor and the Department prior to starting such work ordered, the Department may direct the Contractor to perform the work under the Force Account provisions of Subsection 109.04. The Contractor will proceed immediately with work so ordered and such direction shall neither invalidate the Contract, nor release the surety.

**104.06 Differing Site Conditions.** If differing site conditions are encountered at the work site, the Contractor shall promptly notify the Department as specified in Subsection 104.08. No further disturbance of the site or performance of the affected work is to be done after the alleged differing site conditions are noted unless directed in writing by the Engineer.

Upon written notification, the Engineer will investigate the conditions and determine if they differ materially as defined in Subsection 101.26. If so, and the conditions cause an increase or decrease in the cost or time required for the

Contractor to perform the work, an adjustment, excluding loss of anticipated profits, will be made and the Contract modified in writing accordingly. The Engineer will notify the Contractor whether or not an adjustment of the Contract is warranted.

No Contract adjustment resulting in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice as specified in Subsection 104.08. Adjustments in the Contract price will be made under Subsection 109.04, and adjustments in Contract time will be made under Subsection 108.07.

**104.07 Suspension of Work.** The Engineer may suspend the work in whole or in part by written order to the Contractor, for any reason or condition which would be in the best interest of the Department. The Engineer may also suspend the work when the Contractor fails to perform any provisions of the Contract. The Contractor shall immediately comply with the written order of the Engineer to suspend the work wholly or in part. The work shall be resumed when conditions are favorable as determined by the Engineer or when methods are corrected as approved in writing by the Engineer.

- A. If the delay resulting from the written suspension order is considered unreasonable, the Contractor shall submit a written request to the Engineer providing the reasons and justification for any Contract adjustment considered necessary as a result of the suspension. The justification for a time extension shall follow the notification and documentation procedures defined in Subsection 108.07. The written request for the Contract adjustment must be submitted to the Engineer in writing seven calendar days following receipt of the Engineer's notice to resume work. An adjustment will not be made unless the request has been submitted within the prescribed time.
- B. There will be no adjustment under the provisions of this Subsection if the work performance would have been suspended or delayed by any other cause, under any other terms or conditions of the Contract.
- C. The request for an adjustment will be reviewed by the Engineer. If there is Agreement that 1) there has been an increase in the Contract performance cost or time as a result of the suspension, and 2) the suspension was caused by conditions beyond the control and not the fault of the Contractor or those parties for whom the Contractor is responsible, adjustments in the Contract price, excluding profit, will be made according to Subsection 109.04. Any adjustments to Contract time will be made according to Subsection 108.07.

**104.08 Notification of Differing Site Conditions, and Extra Work.** The Contractor shall immediately notify the Engineer of alleged changes to the Contract due to differing site conditions, extra work, altered work beyond the scope of the Contract, or action(s) or lack of action(s) taken by the Department that have allegedly changed the Contract terms and conditions.

- A. No further work is to be performed or Contract costs incurred on the change after the date the change occurs unless directed otherwise by the Engineer.
- B. Within seven days of the initial notification, the Contractor shall provide the following applicable information to the Engineer in writing:
  1. The date of occurrence and the nature and circumstances of the occurrence that constituted the alleged change.
  2. Name, title, and activity of each Department representative knowledgeable of the alleged change.
  3. Identify any documents and the substance of any oral communications involved in the alleged change.
  4. Basis for an allegation of accelerated schedule performance, if applicable.
  5. Basis for an allegation that the work is not required by the Contract, if applicable.
  6. Particular elements of Contract performance for which additional compensation may be sought under this Section including:
    - a. Contract item(s) that have been or may be affected by the alleged change.
    - b. Labor or materials, or both, that will be added, deleted, or wasted by the alleged change and what equipment will be idled or required.
    - c. Delay and disruption to the manner and sequence of performance that has been or will be caused by the alleged change.

- d. Estimated adjustments to Contract price(s), delivery schedule(s), staging, and Contract time necessary due to the alleged change.
- e. Estimate of the time within which the Department must respond to the notice to minimize cost, delay, or disruption of performance.

The failure of the Contractor to provide required notice in accordance with this Subsection shall constitute a waiver of any and all entitlement to adjustments in the Contract price or time as a result of the alleged change.

C. Within ten days after the receipt of notice, the Engineer will respond in writing to the Contractor to:

1. Confirm that a change occurred and, when necessary, direct the method and manner of further performance.
2. Deny that a change occurred and, when necessary, direct the method and manner of further performance.
3. Advise the Contractor that additional time is required to evaluate the allegation or adequate information has not been submitted to decide whether 1. or 2. above applies, and indicate the needed information and date it is to be received by the Engineer for further review.

Any adjustments made to the Contract shall not include increased costs or time extensions for delays resulting from the Contractor's failure to provide requested additional information in accordance with this clause.

**104.09 Maintaining Traffic.** The Contractor shall keep all roads open to all traffic during the construction. Where provided in the Contract or approved by the Engineer, traffic may be bypassed over an approved detour route. The Contractor shall keep the section of the Project being used by public traffic in a condition that safely and adequately accommodates traffic. The Contractor shall furnish, erect, and maintain barricades, drums, warning signs, delineators, striping, and flaggers, in accordance the Traffic Control Manual. The Traffic Control Manual may be obtained from the Contract Administration Office.

The Contractor shall bear all expense of maintaining the section of road undergoing improvement including all temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, farms, and other features as may be necessary. Snow removal will not be required of the Contractor. Payment for the furnishing, installation, and maintenance of traffic control will be as provided in Division 700.

If the Contractor does not complete the Work within the Contract completion time (including approved extension time), the cost of all traffic control items to maintain traffic as required in accordance with the Traffic Control Manual (including all subsequent revisions up to the date of the advertisement of the Project), the Plans, and Specifications shall be borne by the Contractor to complete the remaining work beyond the Contract time. Traffic control items shall include but not be limited to warning lights, warning signs, barricades, plastic drums, Portland cement concrete safety barrier, flaggers, police officers, arrow panel, message board, and portable impact attenuator.

**104.10 Rights In and Use of Materials Found on the Work.** The Engineer may authorize the Contractor's use of materials found in the excavation. Payment will be made both for the excavation of such materials at the corresponding Contract unit price and for the Contract item for which the excavated materials are used. The removed material shall be replaced if necessary with acceptable material at no cost to the Department. Do not excavate or remove any material from within the highway location that is not within grading limits without written authorization from the Engineer.

**104.11 Restoration of Surfaces Opened by Permit.** The right to construct or reconstruct any utility service in the highway or street or to grant permits to construct or reconstruct is, at any time during construction, hereby expressly reserved by the Department. The Contractor shall not be entitled to any damages for unauthorized digging or any delay occasioned thereby.

Any individual, firm, or corporation wishing to make an opening in the highway must secure a permit from the Department. The Contractor shall allow parties bearing such permits and only those parties, to make openings in the highway. When ordered, the Contractor shall make all necessary repairs due to such openings and such necessary work will be paid for as extra work or as provided in the Contract and will be subject to the same Contract conditions as the original work performed.

**104.12 Value Engineering Proposals (VEP) by the Contractor.** Any cost savings generated to the Contract as a result of VEP offered by the Contractor and approved by the Department will be shared by the Contractor and the Department on a 50-50 basis.

Bid prices shall not to be based on the anticipated approval of a VEP. If the VEP is rejected, the Contract is to be completed at the Contract bid prices.

If the Department determines that the time for response indicated in the submittal under B.5. below is insufficient for review, the Contractor will be promptly notified. Based on the additional time needed by the Department for review and the affect on the Contractor's schedule occasioned by the added time, the Department will evaluate the need for a time extension to the Contract. The Contractor shall have no claim against the Department for delays to the Contract based on the failure to respond within the time indicated in B.5. below if additional information is needed to complete the review. Until the proposal is accepted by the Department, the Contractor shall remain obligated to the terms and conditions of the existing Contract.

- A. *General.* VEP contemplated are those that could produce a savings to the Department without impairing essential functions and characteristics of the facility, including but not limited to, service life, economy of operation, ease of maintenance, desired appearance, and safety.
- B. *Submittal of Proposal.* The following materials and information shall be submitted with each proposal.

- 1. A statement that the proposal is submitted as a VEP.
- 2. A description of the difference between the existing Contract and the proposed change, and the cooperative advantages and disadvantages of each, including effects on service life, economy of operations, ease of maintenance, desired appearance, and safety.
- 3. A complete set of the Plans and Specifications showing the proposed revisions relative to the original Contract features and requirements.
- 4. A complete analysis indicating the final estimated costs and quantities to be replaced by the VEP compared to the new costs and quantities generated by the VEP.
- 5. A statement specifying the date by which a change order adopting the VEP must be executed to obtain the maximum cost reduction during the remainder of the Contract.
- 6. A statement detailing the effect the VEP will have on the time for completing the Contract.
- 7. A description of any previous use or testing of the VEP and the conditions and results. If the VEP was previously submitted on another Department project, indicate the date, Contract number, and the action taken by the Department.

- C. *Conditions.* VEP will be considered only when all of the following requirements are met:

- 1. VEP, approved or not approved by the Department, apply only to the ongoing contract(s) referenced in the VEP and become the property of the Department. The VEP shall contain no restrictions imposed by the Contractor on their use or disclosure. The Department shall have the right to use, duplicate, and disclose in whole or in part any data necessary for the use of the VEP. The Department retains the right to use any VEP or part thereof on other projects without obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.
- 2. If the Department is already considering certain revisions to the Contract or has approved certain changes in the Contract for general use that are subsequently incorporated in a VEP, the Department will reject the VEP and may proceed without obligation to the Contractor.
- 3. The Contractor shall have no claim against the Department for costs or delays due to the Department's rejection of a VEP, including but not limited to, development costs, loss of anticipated profits, increased material or labor costs.
- 4. The Engineer will be the sole judge as to whether a VEP qualifies for consideration and evaluation. It may reject any VEP that requires excessive

time or costs to review, evaluate, or investigate, or that is not consistent with the Department's design policies and criteria for the Project.

5. The Department will reject all or any portion of work performed under an approved VEP if unsatisfactory results are obtained. The Department may direct the removal of such rejected work and require the Contractor to proceed in accordance with the original Contract requirements without reimbursement for work performed under the proposal, or for its removal. Where modifications to the VEP are approved to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the Contract bid prices as if it were constructed under the original Contract requirements. The rejection or limitation of reimbursement shall not constitute the basis of any claim against the Department for delay or for other costs.
6. The proposed work shall not contain experimental features but shall be proven features that have been used under similar or acceptable conditions on other projects or locations acceptable to the Department.
7. VEP will not be considered if equivalent options are already provided in the Contract.
8. The savings generated by the VEP must be sufficient to warrant a review and processing.
9. A proposal changing the type or thickness of the pavement structure will not be considered.
10. Additional information needed to evaluate VEP will be provided in a timely manner. Untimely submittal of additional information will result in rejection of the VEP. Where design changes are proposed the additional information could include results of field investigations and surveys, design computations, and field change sheets.

D. *Payment.* If the VEP is accepted, the changes and payment will be authorized by a change order. Reimbursement will be made as follows:

1. The changes will be incorporated into the Contract by changes in quantities of unit bid items, and/or new agreed price items, as appropriate, under the Contract.
2. The cost of the Value Engineering work as determined from the changes will be paid directly. In addition, the Department will pay the Contractor 50% of the savings to the Department as reflected by the difference between the cost of the revised work and the cost of the related construction required by the original Contract computed at Contract bid prices.
3. The Contractor's costs for development, design, and implementation of the VEP are not eligible for reimbursement.
4. The Contractor may submit VEP for an approved subcontractor. Subcontractors may not submit a VEP except through the Contractor.

**104.13 Final Cleaning of Project Site.** Before final inspection of the Project, the Project, publicly owned borrow source, and all areas affected by the Contractor in connection with the work within the right-of-way shall be cleaned of all rubbish, excess materials, temporary structures, and equipment. All surfaces and slopes, whether old or new, shall be trimmed to the cross-section, all grass and weeds, which are taller than 150 mm, shall be cut, and all parts of the work shall be left in an acceptable condition. The cost of the final cleanup shall be incidental to the Contract and no separate payment will be made.

**104.14 Contractor's Responsibility for Work.** Until the Contractor has achieved substantial completion, the Contractor shall have the sole and absolute responsibility for the work and to provide for the protection and safety of employees of the Department, Contractor, subcontractors, suppliers, and members of the general public. In no case, including but not limited to, supervisory acts or administration of the Contract by the Engineer, will the Contractor be relieved of the responsibility to indemnify the Department pursuant to the provisions of the Contract.

At the Contractor's expense, the Contractor shall rebuild, repair, restore, and make good all losses, injuries, or damages to any portion of the work from any cause beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, such as earthquake, tidal wave, tornado, hurricane, or other cataclysmic phenomenon of nature, or acts of the public enemy or of governmental authorities.

In case of the suspension of work the Contractor shall be responsible for the Project and shall take such precautions as may be necessary to prevent damage to the Project, provide for normal drainage and normal traffic operations, and to erect any necessary temporary structures, signs, or other facilities. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedings, and soddings furnished under the Contract, and shall take adequate precautions to protect new tree growth and other vegetative growth against injury.

## **SECTION 105 CONTROL OF WORK**

**105.01 Authority of the Engineer.** The Engineer is the administrator of the Contract and not a supervisor of the work. All work shall be performed to the satisfaction of the Engineer, but in no case shall the Contractor be relieved of complete responsibility for the work. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the manner of performance and rate of progress of the work; all questions which may arise as to the interpretation of the Plans and Specifications; all questions as to the acceptable fulfillment of the Contract on the part of the Contractor; all disputes and mutual rights between contractors; and all questions as to compensation. At the preconstruction meeting the Engineer will determine and communicate to the Contractor the chain of command and the extent of authority Department personnel shall have to make changes to the Contract during the life of the Contract.

The Engineer has the authority to suspend the work, wholly or in part, due to the failure of the Contractor to correct conditions unsafe for the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for such periods as may be deemed necessary due to conditions the Engineer considered unsuitable for the prosecution of the work or for any other condition or reason deemed to be in the public interest.

The Engineer's authority to impose any Contract sanction, including suspension of the work, withholding payments, or the like, will not relieve the Contractor of sole and absolute responsibility for the Project, performance of the work, and the safety of workers and the general public. The Contractor saves the Department harmless pursuant to Subsection 107.10 for any violation, breach, or omission of the above Contract provision.

**105.02 Authority and Duties of Inspectors.** Inspectors, acting under the authority of the Engineer, are administrators of the Contract and not supervisors of the work. Inspectors employed by or designated by the Department are authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The inspector is not authorized to revoke, alter, or waive any requirements of the Plans or Specifications. The inspector may call the attention of the Contractor to any failure of the work or materials to conform to the requirements of the Contract and shall have the authority to reject materials or suspend the work until any questions at issue can be referred to and decided by the Engineer. Such inspection will not relieve the Contractor from the obligation to perform the work in accordance with the requirements of the Contract.

The inspector shall in no case act as foreman or perform other duties for the Contractor, nor interfere with the management of the work by the latter. Any advice which the inspector may give the Contractor shall in no way be construed as binding the Engineer in any way or releasing the Contractor from fulfilling all of the terms of the Contract. If the Contractor refuses to suspend operations on verbal order, a written order giving the reason for shutting down the work shall be issued. After placing the order in the hands of the Contractor's representatives in charge, the inspector shall immediately leave the job, and in such cases work done during the absence of the inspector will not be paid for and may not be accepted.

**105.03 Inspection of Work.** All materials and each part or detail of the work shall be subject at all times to inspection by the Engineer. Such inspection may include mill, plant, or shop inspection, and any material furnished under these Specifications is subject to such inspection. The Engineer will be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the Contract. Should the work thus exposed or examined prove acceptable, the uncovering, removing, and replacing of the covering or making good of the parts removed shall be paid for as extra work. Should the work so exposed or examined prove unacceptable, the uncovering, removing, and the replacing of the covering or making good of the parts removed, shall be at the Contractor's expense. Any work done or materials used without supervision or inspection by the Department representative may be ordered removed and replaced at the Contractor's expense.

When any unit of government or political subdivision or any railroad corporation is to pay a portion of the cost of the work covered by this Contract, its respective representatives shall have the right to inspect the work. Such inspection shall not make any unit of government or political subdivision or any railroad corporation a party to this Contract, and shall in no way interfere with the rights of either party hereunder.

**105.04 Plans and Working Drawings.** Plans consisting of general drawings and showing such details as are necessary to give a comprehensive understanding of the work specified will be furnished by the Department. The Contractor shall furnish working drawings as may be required by the Engineer. Working drawings shall not incorporate any changes from the requirements of the Contract unless the changes are specifically denoted, together with justification, and are approved in writing by the Engineer. Any change from the requirements of the Contract shall be signed and sealed by a Professional Engineer registered in Delaware. Working drawings and submittals shall be identified by the Contract number. Items or component materials shall be identified by the specific Contract item number and specification reference in the Contract.

The Contractor is responsible for the preparation of all working drawings. However, drawings submitted directly by the supplier or the Contractor's representative will be accepted by the Department, if the letter of submittal indicates that the Contractor has been notified of the submission.

Working drawings for metal structures shall consist of shop detail, erection, and other working drawings showing details, dimensions, sizes of units, and other information necessary for the fabrication and erection of metal work. Working drawings for concrete structures shall provide such details as are required for successful prosecution of the work. These shall include plans for items such as falsework, bracing, cofferdams, formwork, masonry layout diagrams, and bending diagrams for reinforcing steel.

Working drawings for electrical and mechanical equipment shall consist of nine copies of the manufacturer's catalog cuts, drawings, wiring diagrams, etc., and shall be submitted to the appropriate District Engineer section designated at the preconstruction meeting for review. Two sets will be returned with review or corrections noted. After all items of a particular system have been reviewed, the Contractor shall prepare an "Instruction Book" especially for the system. The "Instruction Book" shall contain an equipment list, a complete description of the equipment, the sequence of operation including inter-locking and protective features, the use of by-pass switches, and a detailed description of all wiring circuits. The book shall also contain a recommended spare parts list, renewal parts bulletins, and instruction bulletins for the equipment furnished. Diagrams and drawings shall be of reduced size suitable for binding. A proper index listing all items shall be included. All shall be properly fastened and bound in a suitable leather or heavy plastic cover book with a title clearly shown.

Prior to final inspection, five copies of the book shall be supplied to the District Engineer. The books must be available during the period when electrical and mechanical systems are being connected and energized, and the final bound copies must reflect any changes or adjustments made during this period.

The Contractor shall submit to the Engineer the number of sets of working drawings indicated on the flowchart in Figure 105-1. Work shall not be performed or materials ordered prior to review of the working drawings. The number of sets of working drawings marked with any suggested modifications or comments that will be returned to the Contractor are shown in Figure 105-1. The other sets will be retained by the Department.

The returned drawings will be stamped as follows:

- A. *"Returned for Resubmission"*. In this case, revisions or corrections must be made, and the drawings resubmitted for review.
- B. *"Reviewed for General Conformity with Plans and Specifications"*. In this case if the Contractor agrees with the comments, the comments shall be incorporated, and the Contractor does not need to resubmit the drawings. If the Contractor does not agree with the comments, then the Contractor shall state this in writing and submit this to the Department within ten working days after receipt of the comments.

The Department does not review every detail of every working drawing or other submittal made by the Contractor. As a consequence, responsibility for the completeness, accuracy, and conformance to Contract requirements of all submittals rests with the Contractor. The Department accepts no responsibility for the completeness and accuracy of approved submittals or the failure of approved submittals to conform with the requirements of the Contract.

Reviewed working drawings, submittals, or resubmittals will be transmitted to the Contractor within 45 days from the date of receipt by the Department. If a railroad, the U.S. Coast Guard, Municipality, or other entity as specified in the Contract is required to review the working drawings, the reviewed working drawings will be returned within 60 days from the date of receipt by the Department. If the working drawings are not returned by the time specified, no additional

compensation will be allowed except that an extension of time in accordance with Subsection 108.07 will be considered. Upon completion of the work, the original drawings of structural steel work shall be supplied to the Department.

**105.05 Conformity with Plans and Specifications.** All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross-section, dimensions, and material requirements, including tolerances, shown on the Plans or indicated in the Specifications.

In the event the Engineer finds the materials or the finished product in which the materials used are not within reasonably close conformity with the Plans and Specifications, but that reasonably acceptable work has been produced, the Engineer will then make a determination if the work shall be accepted and remain in place. In this event, the Engineer will document the basis of acceptance which will provide for an appropriate adjustment in the Contract price for such work or materials if deemed necessary.

In the event the Engineer finds the materials or the finished product in which the materials are used or the work performed are not in reasonably close conformity with the Plans and Specifications, and the result is an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor. If there are provisions in the Contract for the acceptance of materials or work that are not in full compliance with the minimum requirements stated, pay adjustment factors reflecting the payment to be made for the work or materials will be included in the applicable Sections.

**105.06 Coordination of the Plans, Standard Specifications, Supplemental Specifications, and Special Provisions.** These Specifications, Supplemental Specifications, Plans, Special Provisions, and all supplementary documents are essential parts of the Contract and a requirement occurring in one is binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Contract. In case of a discrepancy between these Contract components the governing ranking will be:

1. General Notices
2. Special Provisions
3. Plans
4. Supplemental Specifications
5. Standard Construction Details
6. Standard Specifications

The Contractor shall not take advantage of any apparent error or omission in the Contract. If the Contractor discovers an error or omission, the Engineer shall be promptly notified. The Engineer will make corrections and interpretation as necessary to fulfill the intent of the Contract. Scaled measurements shall not be used when the dimensions on the Plans are given or can be computed.

**105.07 Cooperation by the Contractor.** The Contractor will be supplied with two copies of the Plans and bid proposal. One copy shall be kept at the Project site at all times. The Contractor shall give the work constant attention necessary to facilitate progress and cooperate with the Engineer in every way possible.

The Contractor shall have on the Project site at all times a competent superintendent capable of reading and understanding the Contract and experienced in the type of work being performed. The superintendent shall receive instructions, be authorized to act for the Contractor, and have full authority to execute orders or the directions of the Engineer without delay.

**105.08 Cooperation Between Contractors.** The Department reserves the right to contract for and perform other or additional work on or near the limits of construction covered by the Contract. It shall be the responsibility of contractors working on the same project to coordinate their work and cooperate with each other. In case of a dispute, the Engineer will be the referee, and the Engineer's decision will be final and binding on all. When separate contracts are let within the limits of any one project, each contractor shall conduct the work without interfering or hindering the progress or completion of the work by other contractors. Each contractor involved shall assume all liability, financial or otherwise, in connection with their contract and shall protect and save harmless the Department, from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other contractors working within the limits of construction of the same project.

The Contractor shall arrange the work and place and dispose of materials being used without interfering with the operations of other contractors within the limits of the same project. The work shall be coordinated with the work and sequence of other contractors.

**105.09 Utilities.** Bidders are hereby notified that within the limits of the work under this Contract, several utility lines may be encountered. The location of all utilities shown on the Plans or mentioned herein are approximate locations only. The Department will notify all utility companies, pipeline owners, railroads, or other parties known to be affected, and endeavor to have all necessary adjustments of the public or private utility fixtures, pipelines, and other facilities and appurtenances within or adjacent to the limits of construction made as soon as practicable. Notwithstanding any other provision of this Contract, the Contractor shall not proceed with the work until the Contractor has conferred with the Engineer, the utility companies, and the municipal or county authorities in an effort to secure the most accurate and most recent information as to utility locations. As required by Chapter 8, Title 26 of the Delaware Code, the Contractor shall not begin any construction around or adjacent to utilities without notifying the utility owners at least two working days, but not more than ten working days in advance of starting the work.

Water lines, gas lines, wire lines, services connections, water and gas meter boxes, water and gas valve boxes, light standards, cable ways, signals, and all other utility facilities and appurtenances within the limits of the proposed construction that require moving, including the work involved in relocating or otherwise altering such utilities, are to be moved by others at no expense to the Contractor, except as otherwise provided for in the Special Provisions or as noted on the Plans.

Any relocation or rearrangement of utilities made for the Contractor's sole convenience shall be paid for by the Contractor.

It is understood and agreed that the Contractor has considered in the bid all the permanent and temporary utility appurtenances in their present or relocated positions as shown on the Plans or as readily discernable 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.

The relocation of any existing utilities which will interfere with the proposed construction may also be in operation simultaneously with the work to be performed under this Contract.

Any damage to utility services caused by the Contractor must be repaired at the Contractor's expense. Such damage shall be repaired immediately.

Prior to performing any work on the Project, the Contractor shall contact all utility companies, pipeline owners, railroads, or other known parties affected and "Miss Utility" of DELMARVA in order to ensure that all such utilities have received notice and in order that all utility adjustments may be made.

"Miss Utility" is a report center system that enables the public, contractors, utilities, and other excavators to notify participating member utilities of planned digging activities by making one call.

" Miss Utility" is operated jointly by the Utilities Service Protection Center of DELMARVA (USPC) on behalf of the following utilities:

American Cable TV	Comcast - Salisbury
Artesian Water Co.	DE Department of Transportation
AT & T Co.	Delaware Electric Corp., Inc.
Bell Atlantic - DE	DELMARVA Power & Light Co.
Bell Atlantic - MD	Eastern Shore Gas Co., Inc.
Chesapeake Utilities Corp.	Eastern Telelogic Corp.
Choptank Electric Corp., Inc.	Easton Utilities Commission
City of Cambridge	Energy Transporters, Inc.
City of Chincoteague	Kent County Engineering
City of Delaware City	Falcon Classic Cable
City of Dover	Marcus Cable TV - DE/MD
City of Lewes	MCI, Inc.
City of Milford	Metropolitan Fiber System
City of Newark	Paradee Gas Co.
City of New Castle	Public Water Supply Co.
City of Wilmington	Town of Smyrna
Colonial Pipeline Co.	United Water - DE
Columbia Gas Trans. Corp.	University of Delaware
Comcast - Dover	Utility System, Inc.
Comcast - Georgetown	Wil-Tel Group

The report center is essentially a message center, to which all participating parties are connected by a private line teletype network. The work location report is called in over two primary numbers, toll free, 1-800-441-8355 and 1-800-282-8555 in Delaware only. The area covered is the entire DELMARVA Peninsula.

A minimum of two but not more than ten working days advance notice of starting time is required. This assures the person calling of having the underground facility located prior to excavation.

The party reporting a digging operation is asked a standard format of questions to provide the utilities with the necessary information required to ensure an adequate location of the activity. The caller is given a ticket number for reference purposes. The center specifically locates reported areas of activity on a master map and determines the spot by grid coordinates. This information is then transmitted to the participating parties via high speed teletype network. Messages received are sent out immediately during normal work hours (7:30 AM to 5:00 PM, Monday through Friday). Messages received after normal working hours, Saturdays, Sundays, or holidays are taken, logged, and transmitted within one hour the next normal work day.

The work location report is received by the participating utility which immediately locates the work area by the information transmitted from the message center. The utility must then respond to the person originating the call by 1) stating they have no underground facilities at the designated location or 2) stating there are facilities in the area and dispatching a locating crew to the site and marking their underground facility with stakes, flags, and/or paint horizontally over the ground.

USPC recommended safety color codes will be used: Orange for communications, red for power, blue for water, green for sewer, yellow for gas and petroleum products, brown for slurry pipes, purple for radioactive material. This will enable the reporting party to visually see if the utility has responded.

**105.10 Construction Stakes, Lines, and Grades.** The Engineer will furnish and set control and construction stakes unless otherwise specified.

The Engineer will establish right-of-way, limit of construction, and easements if needed, and construction stakes establishing right-of-way easement lines, slopes, profile grades, centerline or off-set lines, and benchmarks. The Department may furnish the Contractor with information relating the lines, slopes, and grades. The Engineer will establish structure working points, elevations, and all the necessary points and off-set to complete the structure. These stakes and marks constitute the field control by which the Contractor shall establish other necessary controls and perform the work. Before beginning of the work, the Contractor shall determine the meaning of all stakes, indicated measurements, and marks provided by the Department.

The Engineer will also perform preliminary and final cross-sections of borrow pit sites and cross-sections for bedrock and undercut excavation.

The Contractor is responsible for the preservation of all stakes and marks. The labor cost of the survey crew replacing disturbed stakes and marks will be deducted from the payment due for the work.

The Department is responsible for the accuracy of lines, slopes, grades, and other engineering work set forth under this Subsection. The Department will not be responsible for staking delays unless the Engineer is provided ten calendar days notice prior to beginning work on an item and thereafter 48 hours notice that stakes are needed.

**105.11 Removal of Defective and Unauthorized Work.** Defective or unauthorized work shall be removed and disposed of immediately upon rejection. Work done without lines and grades being given, or work done beyond the lines and grades shown on the Plans or any change order or supplemental agreement or work done without written authority will be considered as unauthorized and will not be measured or paid for by the Department. Work so done may be ordered removed and replaced at the Contractor's expense. Failure of the Contractor to remove and properly dispose of rejected work immediately after receiving written notice to do so shall be sufficient cause for the termination of the Contract. Furthermore, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs from the amount due or to become due the Contractor.

**105.12 Load Restrictions.** The Contractor shall comply with all legal and contractual load restrictions in the hauling of materials or equipment on public roads. A hauling permit or other special permit will not relieve the Contractor of liability for damage to public or private property which may result from the movement of such loads or equipment. Vehicles transporting construction materials to Department projects shall not exceed the gross vehicle weight (GVW) or licensed weight, if less, as specified in the Delaware Code. Materials inspection weigh tickets will not be issued by Department personnel for GVWs in excess of the allowable maximum.

Payment for materials delivered to the Project shall not exceed the allowable GVW minus the truck tare weight. An average tare weight may be established on a basis approved by the Engineer so that empty weighing is not necessary before every load. No payment will be made for any excess material weight.

It shall be the responsibility of the Contractor to notify its subcontractors, vendors, and suppliers of this requirement. The maximum GVW for different vehicle axle configurations is as follows; provided that in the case of three-axle vehicles the extra weight fee has been paid and is so noted on the registration card:

Customary Values	
Single Unit Values	GVW, Maximum
2-axle vehicle (e.g., 2-axle dump truck)	40,000 lbs.
3-axle vehicle (e.g., 3-axle dump truck)	65,000 lbs.
	*70,000 lbs.
4-axle vehicle (e.g., 4-axle dump truck)	73,280 lbs.
Tractor-Semi-Trailer Combinations	
3-axle combination unit	60,000 lbs.
4-axle combination unit	70,000 lbs.
5-axle combination unit	80,000 lbs.
* When extra weight fee has been paid and is so noted on registration card.	

Metric Values	
Single Unit Values	GVW, Maximum
2-axle vehicle (e.g., 2-axle dump truck)	18 000 kg
3-axle vehicle (e.g., 3-axle dump truck)	29 500 kg
	32 000 kg
4-axle vehicle (e.g., 4-axle dump truck)	33 000 kg
Tractor-Semi-Trailer Combinations	
3-axle combination unit	27 000 kg
4-axle combination unit	32 000 kg
5-axle combination unit	36 000 kg

The Contractor shall be responsible for all damages done by hauling equipment.

**105.13 Maintenance During Construction.** The Contractor shall maintain the work during construction and until the Project is accepted. This maintenance shall be performed every day continuous, and effective with adequate equipment and forces to keep the roadway and structures in a satisfactory condition.

The Engineer will notify the Contractor if there is a failure to comply with these provisions. If the Contractor fails to remedy unsatisfactory maintenance within 24 hours after receipt of the notice, the Engineer may proceed to maintain the Project. The entire cost of this maintenance will be deducted from monies due or to become due the Contractor.

If the Contract involves the placement of material on or the use of a previously constructed subgrade, base course, pavement or structure, the previously constructed work shall be maintained by the Contractor during construction operations.

The cost of maintenance work during construction and before the Project is accepted shall be incidental to the Contract. In the event that the Contractor's work is ordered shut down for failure to comply with the provisions of the Contract, the Contractor shall maintain traffic, protect and maintain the roadway and structures, and provide ingress and egress for local residents as may be necessary during the period of suspended work or until the Contract has been declared in default.

**105.14 Opening Sections of the Project to Traffic.** The Engineer may order certain sections of work to be opened to traffic or other use prior to completion or acceptance of the work. Opening these sections shall not constitute acceptance of work or waiver of any Contract provisions.

On those sections opened, the cost of establishing maintenance and protection of traffic, maintaining the roadway or other work to accommodate traffic or other use, and repairing damage to the work that occurs after opening will be determined as follows:

- A. If the Contract provided for a total road closure, the opening is not part of a phased or staged construction, and the opening is not due to the fault or inactivity of the Contractor, the added costs will be at the Department's expense. Compensation for these added costs will be in accordance with Subsection 109.04.
- B. If the opening was designated as part of the Contract such as phased or staged construction, then the added costs are incidental to the Contract and the work will be performed at no additional expense to the Department.
- C. If the opening was due to the fault or inactivity of the Contractor, then the work will be performed at no additional expense to the Department. If the Contractor is dilatory in completing features of the work according to the Contract or progress schedule, the Engineer will give written notification establishing a time period for completing these features. If the Contractor fails to complete or make a reasonable effort to complete the work according to the written notification, the Engineer may order all or a portion of the Project opened to traffic. The Contractor shall not be relieved of liability or responsibility for maintaining the work and shall conduct the remaining construction operations with minimum interference to traffic at no additional expense to the Department for any added cost of the work.

**105.15 Claims for Adjustment and Disputes.** In any case where the Contractor believes that extra compensation is due for work or material not clearly covered in the Contract or not ordered by the Engineer as an extra, or the Contractor feels that it has encountered unusual and unforeseen conditions beyond its control, as defined herein, not discoverable by reasonable inspection and diligence on the Contractor's behalf and if all other Contract provisions have been complied with, the Contractor shall notify the Engineer orally or in writing of its intention to make claim for such extra compensation before the Contractor begins the work on which the claim is based on. If written notification is not given within five working days and the Engineer is not afforded proper facilities by the Contractor for keeping strict account of actual costs as required, then the Contractor waives the claim for extra compensation.

- A. *Contractor Written Notification.* The written notification to the Engineer shall include:
  1. the date of occurrence and the nature and circumstances of the occurrence that constitute a change;
  2. name and title of Department representatives knowledgeable of the claimed change; and
  3. particular elements of Contract performance for which additional compensation may be sought under this Section.

Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. Nothing contained in this Subsection shall be construed as establishing any claim contrary to the terms of Subsection 104.05 or any other provision of the Specifications.

B. *Engineer Response.* Within ten calendar days after receipt of notice, the Engineer will respond in writing to the Contractor to:

1. confirm that a change occurred and, it shall be allowed and paid as an extra as provided herein; or
2. deny that a change occurred and, direct the Contractor to follow the claims submittal procedure as outlined; or
3. advise the Contractor that adequate information has not been submitted to decide whether B.1. or B.2. above applies, and indicate the need for more information for further review. The Department will respond to such additional information within ten calendar days of receipt from the Contractor; or
4. advise the Contractor that the District will review the claim, after obtaining the claims submittal as described herein.

Any adjustments made to the Contract shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide requested additional information in accordance with this clause.

C. *Claim Submittal.* The Contractor must submit a formal claim in writing within 60 calendar days after the item claimed has been completed. The Contractor can only recover, and the formal claim shall only consist of those items allowed under Subsection 105.19 and must contain:

1. the precise nature and basis for the claim;
2. each fact upon which the Contractor relies, to support the claim;
3. the precise reason the Contractor believes the claim should be granted;
4. the language in the Contract upon which the Contractor relies, in support of the claim;
5. the amount of money or nature and extent of relief to which the Contractor believes it is entitled; and
6. any other factors which the Contractor believes support the claim.

In complying with this requirement, the Contractor must certify the claim using the following form:

<p><i>The undersigned is duly authorized to certify this claim on behalf of (the Contractor).</i></p>
<p><i>(The Contractor) certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of the Contractor's knowledge and belief, and that the amount requested accurately reflects the Contract adjustment for which (the Contractor) believes that the Department is liable.</i></p>
<p>(THE CONTRACTOR)</p>
<p>By: _____</p>
<p>(Name)</p>
<p>(Title)</p>
<p>Date of Execution: _____</p>

The Contractor agrees to follow the procedure described in this Section and that any claimed dollar amount and/or relief sought, not made pursuant to this Section, within the time limits prescribed shall be forever waived and not raised at any subsequent meeting or hearing dealing with the claim. The Department shall establish a claims procedure to be followed, consistent with these Specifications, which claims procedure shall provide the means and methods by which the Contractor and the Department shall process the claim.

Claims and disputes submitted in accordance with this Section, will be first reviewed fully at the District level. Within 30 calendar days after receiving the claim submittal, the District Engineer will respond, in writing, with the District's decision. If additional time is required by the

District to review the claim, the District Engineer will notify the Contractor. Rejection of the claim or dispute by the District may be appealed to the Claims Committee for review. The Contractor shall give notice of the appeal, in writing, within ten calendar days of the rejection by the District Engineer. The Claims Committee will conduct a claim review meeting attended by representatives of the Contractor and the District. The Committee will conduct the claims review meeting within 45 calendar days after receiving the Contractor's notice of appeal. The proceedings of the Claims Hearing will be recorded by a Court Reporter. The cost associated with the Court Reporter will be shared equally by the Department and the Contractor. A copy of the record of the Claims Hearing will be made available to the Contractor. Within 15 calendar days of the Hearing, the Committee's Chairperson will notify the Contractor, in writing, of the Committee's decision.

The Contractor may appeal the Claims Committee's decision to the Chief Engineer of the Department requesting to proceed with the arbitration process as outlined in Subsection 105.17. The Contractor shall give notice of the appeal to the Claims Committee's Chairperson, in writing, within ten calendar days after receiving the Claims Committee's decision.

**105.16 Chief Engineer's Decision.** After receiving the written notification from the Contractor, appealing the Claims Committee's decision and requesting an Arbitration hearing as outlined in Subsection 105.17, the Chief Engineer will notify the Contractor, in writing, within 30 calendar days of the receipt of the notice regarding the claim. The decisions upon all claims by the Chief Engineer shall represent the findings of the Department.

**105.17 Arbitration.** Any claim, properly presented pursuant to Subsection 105.15, processed through the claims procedure, and finally decided by the Chief Engineer pursuant to Subsection 105.16, in the absence of agreement by the Contractor and the Department as to the resolution thereof, and upon the demand of either party delivered in writing to the other within 30 calendar days from the date of the written decision by the Chief Engineer, as provided in the aforesaid Subsection 105.16; shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect; except as otherwise modified by these Specifications. The arbitration proceeding may involve presentation of facts or such portions thereof as have previously been presented at prior administrative hearings held pursuant to Subsection 105.15 herein or may be based entirely upon the record, as established therein. The record established at prior administrative hearings pursuant to Subsection 105.15 shall be specifically admissible at such arbitration proceedings and such facts as have been established shall be specifically binding upon the parties; with the exclusion of opinions and conclusions thereon. Such arbitration shall be specifically based upon the claim presented at prior administrative hearings and no material, information, fact, and/or claim not presented at such hearings held pursuant to said Subsection 105.15 shall be admissible at any arbitration conducted pursuant to this Section. The arbitrators, in their final ruling on the claim shall include a summary of the evidence, findings of fact based upon the evidence, conclusions of law, and a concise statement of the relief awarded. This agreement to arbitrate shall be strictly enforceable as provided under Chapter 57, Title 10 of the Delaware Code, as amended.

**105.18 Contractor and Subcontractor/Supplier Disputes.** Any dispute arising between the Contractor and its subcontractor/supplier concerning payments held in trust, as required by Chapter 8, Title 17 of the Delaware Code, shall be resolved by arbitration. The Department shall not serve as the arbiter of such disputes, but shall, in the absence of agreement between the parties, designate the American Arbitration Association to resolve the matter.

**105.19 Claims.** All claims shall be submitted according to the procedure established in Subsection 105.15. Submit a written claim notification a maximum of five working days after the original oral notification. Provide in the written notification a brief statement of the reason and basis for the claim and a list of the items for which additional compensation is being claimed in order to permit the Engineer to keep a strict account of actual costs incurred. Within 60 calendar days after that portion of the work upon which the claim is based is completed, the Contractor shall submit to the Department an itemized list of labor, equipment, and materials used and such other costs as specifically allowed pursuant to this Subsection. The Contractor shall not be entitled to recover any costs other than those contained and allowed herein. As described below, A. through G. shall cover all direct and indirect costs allowed and H. identifies all non-allowable costs.

- A. *Labor.* In accordance with Subsection 109.04 D.1.
- B. *Bond, Insurance, and Tax.* In accordance with Subsection 109.04 D.2.
- C. *Materials.* In accordance with Subsection 109.04 D.3.
- D. *Equipment.* In accordance with Subsection 109.04 D.4.

- E. *Percentage Markups*. In accordance with Subsections 109.04 D.6. and 109.04 D.7.
- F. *Subcontractor Claims*. Any claim submitted by the Contractor on behalf of a subcontractor shall be submitted according to Subsection 105.15 and shall be solely limited to the list of all direct or indirect costs permitted by A. through D. above. For work approved by the Department, the subcontractor will be allowed a percentage markup as permitted by Subsections 109.04 D.6. and 109.04 D.7. The Contractor will be allowed an additional percentage markup as permitted by Subsection 109.04 D.8. to be computed on the final sum total of such subcontractor cost claimed under A. through D. above for portions of subcontractor work approved by the Department.
- G. *Waiver of Liquidated Damages*. A claim, not for additional costs, but for a waiver by the Department of an assessment of liquidated damages, in whole or in part, may also be made by the Contractor as part of this Subsection.
- H. *Non-allowable Damages or Expenses*. The expenses listed above as A. through G. shall constitute the sole cost(s) and expense(s) to which the Contractor shall be entitled on any claim submitted for additional compensation or settlement of any claim made under these Specifications, except as further provided in Subsection 105.21. The parties agree that the Department will have no liability for the following items of damage or expense:
  - 1. Profit in excess of that provided herein,
  - 2. Loss of profit,
  - 3. Labor and equipment inefficiencies,
  - 4. Home office overhead in excess of that provided herein,
  - 5. Consequential damages, including but not limited to loss of bonding capacity, loss of bidding opportunities and insolvency,
  - 6. Indirect costs or expenses of any nature,
  - 7. Attorneys fees, claim preparation expenses or costs of litigation, and
  - 8. Interest on any claimed amounts.
- I. Any claim submitted shall not affect in any manner the imposition or waiver of liquidated damages, except that any liquidated damages shall be waived for any delay for which a time extension is granted in accordance with Subsection 108.07.
- J. The Contractor agrees to make its accounting records and cost information available at the time of submission of the claim and such other records as the Department may require, in order to determine the validity and amount of each item claimed. They shall be open to inspection or audit by representatives of the Department during the life of the Contract and for a period of not less than three years after the Contractor's acceptance of Final Payment as set forth in Subsection 109.10 and the Contractor shall retain such records for that period. Where payment for materials, equipment, or labor is based on the cost of forces other than the Contractor's, the Contractor shall make every reasonable effort to ensure that the cost records of such other forces are open to inspection and audit by representatives of the Department on the same terms and conditions as the cost records of the Contractor. Payment for the cost of such forces may be deleted if the records of such third parties are not made available to the Department's representatives. If an audit is to be commenced, the Contractor is to be provided with a reasonable notice of the time when such audit is to begin. In case all or a part of such records are not made available, the Contractor understands and agrees that any items not supported by reason of such unavailability of the records will not be allowed, or if payment therefor has already been made, the Contractor shall refund to the Department the amount so disallowed.

**105.20 Project Acceptance.** Final acceptance will not occur until completion of the Project in accordance with Subsection 101.16. However, at the request of the Contractor and at the sole discretion of the Engineer, the Contract time may be stopped without all the required documents, certificates, or proofs of compliance. When the Contract time is stopped, the Contractor is to expeditiously provide the exempted documents, certificates, or proofs of compliance. Final acceptance and payment will not be made until all documents, certificates, or proofs of compliance have been executed and delivered to the Engineer.

- 1. *Partial Project Acceptance*. When a unit or portion of the Project, such as a structure, interchange, or section of road or pavement is substantially completed, the Contractor may request final inspection of that unit or portion. If the unit or portion has been completed in accordance with the Contract, the Engineer may accept it as completed. The decision to make partial acceptance of a unit is solely at the discretion of the Engineer. Partial acceptance will not void or alter any of the terms of the Contract.

2. *Project Acceptance.* Upon receiving notice from the Contractor of Project completion, the District will make a semi- final inspection. During this inspection, the District will note by stations and in detail all work or conditions requiring correction. The Contractor shall immediately prosecute the corrective work. When completion of the noted corrections are completed to the satisfaction of the District, a final inspection will be arranged. The Engineer will make a final inspection of the work to certify the Project can be used, occupied, or operated for its intended use. The Engineer will note any further corrective measures as deemed necessary. The Contractor shall prosecute corrective measures immediately. When the work is satisfactorily completed, together with receipt of proper documentation as noted herein, the Engineer will notify the Contractor in writing of the date of acceptance of the Project.

**105.21 Claims for Delay Damages.** The Department may grant time extensions in the performance of work for delays caused by acts of God, acts of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or other causes, only when these delays are not the fault or responsibility of the Contractor, are beyond the Contractor's control, and could not have been anticipated by the Contractor. For such delays that are also beyond the control and not the fault of the Department, the Contractor shall be entitled to a time extension, but shall not be entitled to recover any damages resulting from such delays.

In the event a delay is not caused by the Contractor's fault or negligence but is caused wholly by actions of the Department, or determined by an arbitrator and/or judicial proceeding to be the Department's sole responsibility, an extension of time shall be granted in an amount equivalent to the actual critical delay caused by the Department, and the Contractor shall not be entitled to any additional compensation except as allowed herein.

All direct and indirect costs allowed are covered in A. below, and B. below identifies all non-allowable costs.

Compensation provided by A. below shall not be duplicative of compensation already provided as part of Subsection 105.19 or 109.04:

- A. *Allowable Direct and Indirect Expenses.* Only the additional costs associated with the following items will be recoverable by the Contractor for delay compensation:

1. *Extended Field Overhead.* Field overhead costs necessary for the prosecution of the work during the delay period, as follows:

- a. *General Field Supervision.* Such costs include but are not limited to general field supervision, assistants, watchman, clerical and other field support staff. Compute these labor costs in accordance with Subsection 109.04 D.1. For salaried personnel, calculate the rate of wage (or scale) actually paid by dividing the weekly salary by seven days per week.
- b. *Field Office Facilities and Supplies.* Such costs include but are not limited to field office trailers, tool trailers, office equipment rental, temporary toilets, and other incidental facilities and supplies. Compute these costs on the basis of the actual added costs incurred by the Contractor to provide these services as a result of the delay.
- c. *Maintenance of Field Operations.* Such costs include but are not limited to telephone, electric, water, and other similar expenses. Compute these costs on the basis of the actual added costs incurred to maintain these services as a result of the delay.

These extended field overhead costs are not duplicative of those compensated in Subsection 109.04 D.7.

2. *Labor.* For all necessary, non-salaried, idle labor that must remain on the Project during such periods of delay due to collective bargaining contracts or other reasons approved by the Engineer, compute the labor costs in accordance with Subsection 109.04 D.1.

3. *Bond, Insurance, and Tax.* In accordance with Subsection 109.04 D.2.

4. *Equipment.* For any idle equipment other than small tools that must remain on the Project site during delays, the Contractor is to receive compensation at the rate calculated in Subsection 109.04 D.4. Should it not be necessary for machinery or equipment to remain on the Project during delays, the Contractor is to receive transportation costs to remove the machinery or equipment and return it to the Project at the end of the delay period.

5. *Materials.* Costs for material escalation due to the delay or the cost of storage of materials due to the delay are recoverable. Obtain the Engineer's approval prior to storing any material due to a delay.

6. *Percentage Markups.* An additional 10% markup of the total of 1., 2., 3., and 4. above will provide full compensation for home office overhead and any other costs attributed to the delay for which no specific allowance is herein provided. Payment under this Subsection constitutes full compensation for all items of expense related to such delay. No profit is allowed under this Subsection. The markup is not duplicative of those provided in Subsections 105.19 E., 109.04 D.6., and 109.04 D.7.

7. *Records.* Payment will not be made for delays until the Contractor has furnished the Engineer with duplicate itemized statements of the cost as herein above specified and detailed as follows:

- a. Name, classification, date, daily hours, total hours, rate, and extension for each worker and foreman.
- b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- c. Transportation costs.
- d. Cost of bonds, property damage, liability, and workers compensation insurance premiums; unemployment insurance contributions; and social security taxes.

The Engineer will compare the Department's records with those furnished by the Contractor and make any necessary adjustments. When these records are agreed upon and signed by both parties, said records become the basis of payment for the expenses incurred, but do not preclude subsequent adjustment based on a later audit by the Department.

The Contractor's cost records pertaining to expenses under this Subsection shall be open to inspection or audit by representatives of the Department as provided in Subsection 105.19 J.

- B. *Non-Allowable Damages or Expenses.* The expenses listed in A. above shall constitute the sole cost(s) and expense(s) to which the Contractor shall be entitled on any delay claim submitted for additional compensation or settlement of any claim made under these Specifications. The parties agree that the Department will have no liability for the items listed in Subsection 105.19 H.1. through H.8.

## **SECTION 106 CONTROL OF MATERIAL**

**106.01 Source of Supply and Quality Requirements.** All materials used shall meet the requirements of the Contract. The Contractor shall promptly notify the Engineer of the proposed sources of materials to be used in the work prior to delivery. The Engineer has the option of conditionally approving materials at the supply source. If it is determined during use of conditionally approved material that the materials do not meet the Contract requirements, material incorporated in the work shall be corrected to the satisfaction of the Engineer or removed. All materials incorporated in the work shall be new unless otherwise specified in the Contract.

**106.02 Samples, Tests, and Referenced Specifications.** Materials will be inspected, tested, and approved by the Engineer before incorporation into the work. Work in which untested materials are used without approval are used at the

Contractor's risk and may be deemed unacceptable. Payment will not be made for materials found to be unacceptable. Unacceptable materials shall be removed from the work solely at the Contractor's expense.

Unless otherwise designated, material tests will be performed by and at the expense of the Department in accordance with the most recent test methods of the Department, AASHTO, or ASTM in effect on the date of advertisement for bid proposals. When any specification or test is identified in the form of an AASHTO or ASTM number succeeded by "Modified" it refers to an AASHTO or ASTM specification or test as modified by the Department's Materials Manual in effect on the date of advertisement for bid proposals. If there is a difference in the test methods, the order of precedence in the test procedure used will be as follows:

- Materials Manual
- AASHTO
- ASTM

Material sampling or splitting operations will be performed or observed by the Department. The Department reserves the right to retest and subsequently reject materials not meeting the Contract requirements that have been previously tested and conditionally accepted at the source of supply. Materials to be used are subject to inspection, testing, or rejection prior to or during incorporation into the work. Copies of any or all test results will be made available to the Contractor upon request.

When in the judgment of the Engineer, inconsequential quantities and use of materials are required, they may be covered by a field inspection report of materials in lieu of the minimum requirements for sampling materials.

**106.03 Certification of Compliance.** The Contract or the Department's Materials and Testing Schedule will designate materials that can be incorporated in the work if accompanied by certificates of compliance from the manufacturer. The certificates of compliance shall state that the materials or assemblies provided fully comply with the specification requirements of the Contract, and shall be signed by the manufacturer. Each lot of certified materials or assemblies delivered to the Project must be accompanied by a certificate of compliance clearly identifying the materials delivered and the specification requirement satisfied.

Materials or assemblies used on the basis of certification of compliance may be sampled and tested by the Department and if determined not to be in conformance with Contract requirements will be rejected in accordance with Subsection 105.03.

The form and distribution of the certificates of compliance shall be as provided in the Contract or the Department's Materials and Testing Schedule requirements.

**106.04 Manufacturing Plant Inspection.** The Engineer may inspect materials at the acquisition or manufacturing source. Manufacturing plants may be inspected for compliance with specified manufacturing methods. Material samples will be obtained for testing for compliance with material quality requirements.

In the event plant inspection is undertaken, the following conditions shall be met:

A. The Engineer will have the cooperation and assistance of the Contractor and producer of the materials;
B. The Engineer will have full access at any time to all parts of the plant concerning the manufacture or production of the materials being furnished;
C. The Contractor shall arrange for an approved building for the use of the inspector with such building to be located conveniently near the plant and conforming to the requirements of Subsection 106.05;
D. Provide and maintain adequate safety measures; and
E. It is understood that the Department reserves the right to retest all materials which have been tested and accepted at the source of supply after the same have been delivered and to reject all materials which, when retested, do not meet the requirements of these Specifications.

**106.05 Field Laboratory.** The Contractor shall provide a field laboratory consisting of a suitable building in which to house equipment for performing all required tests. The field laboratory for testing at Portland cement concrete plants shall conform to the requirements of Subsection 812.07. The field laboratory for testing at asphalt cement concrete plants shall conform to the requirements of Subsection 823.06. Payment for all field laboratories shall be incidental to the work in the Section for which the laboratory or facility is provided.

**106.06 Buy American Contract Requirement.** In accordance with Section 165 of the Surface Transportation Assistance Act of 1982, Title 23 of the United States Code, the following applies to all contracts: For this Contract, all iron, coating materials, steel materials, and coating of steel must be produced in the United States, except a minimal amount of foreign cement and steel materials may be used provided the cost of materials does not exceed 0.1% of the total Contract cost or \$2,500.00, whichever is greater.

*A. Certificate of Compliance.*

A Certificate of Compliance shall be furnished to the Department by the Contractor. The Certificate shall be signed by the Contractor to the effect that the materials and/or assembled materials will be of domestic origin and will comply in all respects with the requirements of the Contract. Mill test reports verifying that steel products are of domestic origin as defined in the Special Provisions shall be provided. All materials accepted on the basis of Certificate of Compliance may be sampled and tested at any time. Use of material on the basis of Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating material in the Project conforming to the requirements of the Contract. Any material not conforming to such requirements shall be subject to rejection whether in place or not. The Department reserves the right to refuse to permit the use of material on the basis of Certificate of Compliance.

*B. Domestic Material.*

Domestic materials are those which are melted, cast-formed, shaped, drawn, extruded, forged, fabricated, or otherwise processed in the United States.

**106.07 Storage and Handling of Materials.** Materials shall be stored and handled to preserve their fitness for the work. Bulk materials shall be transported in vehicles constructed to prevent loss or segregation after loading and measuring. Stored materials shall be stored in a manner to facilitate prompt inspection and will be subject to inspection and retesting prior to incorporation in the work in accordance with Subsection 106.04.

An approved portion of the right-of-way may be used for the storage of materials and the Contractor's plant and equipment. Additional storage space required shall be provided at the Contractor's expense and option. Private property shall not be used for storage purposes without written permission of the owner or lessee. If requested, copies of such written permission shall be furnished to the Engineer.

Storage and plant sites shall be restored to their original condition by and at the Contractor's expense.

**106.08 Unacceptable Materials.** Materials not conforming to the requirements of the Contract will be rejected and removed immediately from the Project unless the defects have been corrected and approved by the Engineer.

**106.09 Disposal of Unacceptable Materials.** All waste materials removed by earthwork operations shall become the property of the Contractor and shall be removed from the Project or otherwise disposed of as specified. Unless specific disposal sites for waste materials generated by the clearing and grubbing operation are designated on the Plans, the Contractor shall procure disposal sites. Such disposal sites shall be submitted to and approved by the Engineer prior to utilization by the Contractor. The submittal shall include a plan of the disposal area, proposed sediment and erosion control devices, existing and proposed final contours, and proposed security measures. All permit requirements such as those required by the Department of Natural Resources and Environmental Control (DNREC) and the U.S. Army Corps of Engineers shall be met by the Contractor when preparing and utilizing off-site disposal areas. The Contractor shall submit a similar proposal for use of designated disposal sites if such detail is not included in the Contract documents. Costs for preparing these plans are incidental to Section 201. For disposal sites designated on the Plans, payment will be made separately under applicable bid items for all necessary erosion and sediment controls, seeding, and mulching. For Contractor-procured disposal sites, such costs are incidental to Section 201.

**106.10 Department-Furnished Material.** Material furnished by the Department will be delivered or made available to the Contractor at locations specified in the Contract.

The cost of handling and placing Department-furnished materials after they are delivered to the Contractor shall be included in the Contract price for the item in which they are used. Deductions will be made from any monies due for any shortages, deficiencies, and damage that may occur to the material after delivery. Demurrage charges resulting from the Contractor's failure to accept the materials at the designated time and location of delivery will also be deducted from monies due the Contractor.

## **SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

**107.01 Laws to be Observed.** The Contractor is required to investigate and shall strictly comply with, all Federal, State, or county laws and regulations, and city or town ordinances and regulations. The Contractor shall indemnify and save harmless the State of Delaware, the Department of Transportation, its Secretary and all officers, agents, and servants against any claim or liability arising from or based upon the violation of any such laws, ordinances, regulations, orders, or decrees whether by its employees.

If the Contractor should discover any provisions in the Contract that are contrary to or inconsistent with any law, ordinance, regulation, order, or decree, the Contractor shall immediately report it to the Engineer in writing.

**107.02 Permits, Licenses and Taxes.** The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work. Prior to the execution of any contract, the successful bidder shall be required to show that it has satisfied the requirements of Sections 2502 and 2503, Chapter 25, Title 30 of the Delaware Code, and if the bidder is a non-resident corporation, that the bidder has complied with the requirements of Subchapter XIV, Title 8 of the Delaware Code, Annotated Revised 1974, and as amended.

**107.03 Patented Devices, Materials, and Processes.** The Contractor and the surety shall hold and save harmless the State, the Department, their officers or agents, in accordance with the terms of these Specifications, from any and all claims because of the use of any patented design, device, material, or process in connection with the work agreed to be performed under this Contract. Any patent agreement between patentee and the Contractor shall be furnished to the Department.

**107.04 Contractor's Responsibility for Utility Property and Services.** At points where the Contractor's operations are adjacent to properties of railway, telegraph, telephone, power companies, or other utilities, or are adjacent to other properties, facilities, or appurtenances, damage to which might result in considerable expense, loss, or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

In the event of interruption to water or utility services as a result of accidental breakage, or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority. The Contractor shall cooperate with said authority in the restoration of service as promptly as possible. No work shall be undertaken around fire hydrants until appropriate plans for continued service have been approved by the local fire authority.

Fire hydrants on or adjacent to the highway shall be kept accessible to fire apparatus at all times and no material or obstruction shall be placed within 4.5 m of any such hydrant. Work shall be left entirely accessible at all points to fire apparatus at all times.

**107.05 Federal Aid Participation.** When the United States Government pays all or any portion of the cost of a project, the Federal laws authorizing such participation and the rules and regulations made pursuant to such laws must be observed by the Contractor, and the work shall be subject to the inspection of the appropriate Federal agency. Such inspection shall not make the Federal Government a party to this Contract and will in no way interfere with the rights of either party hereunder.

**107.06 Construction Safety, Health, and Sanitary Standards.** It is a condition of all contracts, and shall be made a condition of each subcontract entered into pursuant to the prime contract, that the Contractor, and any subcontractor, shall not require any person employed in performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to such person's health or safety. The Contractor shall provide and maintain in a neat and sanitary condition, such accommodations for the use of its employees as may be necessary to comply with the requirements of the State and local Boards of Health, or of other bodies or tribunals having jurisdiction.

**107.07 Public Convenience and Safety.** In performing the work, the Contractor shall interfere as little as possible with traffic. The Contractor shall provide and maintain ingress and egress for all residences and places of business located along the construction route. So far as practicable, materials stored upon the highway shall be placed so as to cause as little obstruction to the traveling public as possible. If, as determined by the Engineer, it is necessary to keep the road or any portion of it open to travel during the construction thereof, the Contractor shall so perform the work and provide such means that travel will not be obstructed or endangered. The Contractor shall provide and maintain in an acceptable condition such temporary roadways and bridges as may be necessary to accommodate the traffic using or diverted from the roadway under construction, and shall provide and maintain in a safe condition temporary approaches to and crossing of intersecting highways. All sidewalks, gutters, sewers, inlets, and portions of the highway adjoining the roadways under construction shall not be obstructed more than is absolutely necessary.

**107.08 Use of Explosives.** When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and not closer than 300 m from the road or from any building or camping area or place of human occupancy. The Contractor shall notify each public utility company having structures in proximity to the site of the work of its intention to use explosives. Such notice shall be given sufficiently in advance to enable the companies to take such steps as they may deem necessary to protect their property from injury.

The use of explosives will not be permitted within 65 m of any existing, newly finished, or partly finished structure on a project unless authorized in writing by the Engineer. No explosives shall be stored overnight on the Project.

**107.09 Protection and Restoration of Property.** The Contractor shall be responsible for the preservation of all public and private property, trees, monuments, etc., along and adjacent to the roadway not designated on the Plans for repair, removal, or construction. The Contractor shall take the precautions necessary to prevent damage to pipes, conduits, and other underground structures, and shall protect from disturbance or damage all land monuments and property markers until authorized by the Engineer. Any land monument or property markers damaged or disturbed shall be located and reset by Registered Land Surveyors or a Registered Professional Engineer. The Contractor shall not injure or destroy trees or shrubs outside the limits of the graded roadway section, nor remove or cut them without proper authority. Where any direct or indirect damage is done to public or private property on account of any act, omission, neglect, or misconduct in the execution or non-execution of the work on the part of the Contractor, such property shall be restored at the Contractor's expense to a condition similar or equal to that existing before such damage. In case of the failure on the part of the Contractor to restore such property or make good such damage, the Engineer may upon giving 48 hours notice proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any monies due to the Contractor under the Contract.

**107.10 Responsibility for Damage Claims.** The Contractor shall assume the responsibility and liability for, and shall indemnify and save harmless the Department, its officers, and employees, from and against all suits, actions, claims, and all damages, direct or indirect, of whatever nature, caused to any person(s) or property or resulting to the work from any act, work, or plan performed or submitted by the Contractor or upon its behalf; including but not limited to responsibility of the Contractor to provide for the protection and safety of all persons and property. This indemnification and save harmless requirement shall apply, but not be limited to, all suits, actions, claims brought, and all damages resulting from any death, injury, or damage received or sustained by any person(s), third person(s), or property based upon:

- A. Operations of the Contractor, including but not limited to work performed; neglect in safeguarding the work; use of unacceptable materials; any act, work, or plan performed or submitted by the Contractor on its behalf or resulting from performance, nonperformance of the work, or any omission, neglect, or misconduct occurring during the course of the Contract.
- B. Any claim(s) or amount(s) recovered from any infringement(s) of patent, trademark, or copyright.
- C. Any claim(s) or amount(s) arising or recovered under the "Workers Compensation Act", for any violation or alleged violation of any law, ordinance, rule, regulation, order, or decree.

The Department may withhold as retainage for the use of the State to pay any amount claimed or anticipated, as determined by the Engineer, except that such money shall not be withheld when the Contractor produces satisfactory

evidence that it is adequately protected by public liability and property damage insurance. In any event, the surety shall be liable to pay any amount recovered as a result of any suit, action, claim, injuries, or damages sustained and until such time as the matter has been settled or otherwise legally resolved.

**107.11 Furnishing Right-Of-Way.** The Department will be responsible for the securing of all necessary rights-of-way in advance of construction. Any exceptions will be indicated in the Contract.

**107.12 Personal Liability of Public Officials.** The Department, Director, Engineer, or their authorized agents will incur no personal liability as a result of carrying out any of the provisions of the Contract, as the result of exercising any power or authority granted to them thereby, or as the result of any act by the Contractor. In such matters they act as the agents and representatives of the State.

**107.13 No Waiver of Legal Rights.** Upon completion of the work, the Department will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Department from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Department be precluded or stopped from recovering from the Contractor or its surety, or both, such overpayment as it may sustain, or recovering the cost of the failure on the part of the Contractor to fulfill its obligations under the Contract. A waiver on the part of the Department of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the Contract, shall be liable to the Department for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Department's rights under any warranty or guaranty.

**107.14 Hazardous Material.** If any abnormal condition is encountered or exposed that indicates the presence of a hazardous material or toxic waste, construction operations shall be immediately suspended in the area and the Engineer notified. Work shall be continued in other areas of the Project unless otherwise directed by the Engineer. Abnormal conditions include but are not limited to the following: presence of barrels, obnoxious odors, excessively hot earth, smoke, or any other condition that indicates a hazardous material or toxic waste. The conditions shall be treated with extreme caution.

Disposition of the hazardous material or toxic waste shall be made under the requirements and regulations of the applicable State agency.

## SECTION 108 PROSECUTION AND PROGRESS

**108.01 Subletting of Contract.** The Contractor shall not subcontract, sublet, sell, transfer, assign, purchase work or materials from an organization other than its own, or otherwise dispose of the contract or contracts or any portion thereof, or of its right, title or interest therein, without written consent from the Engineer. The Contractor shall perform with its own organization work amounting to not less than 50% of the total Contract bid price, except that any items designated in the Contract as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the original total bid price before computing the amount of work required to be performed by the Contractor with its own organization. Only the original Contract bid price and the value of subcontracted work approved by the Engineer will be used to compute the percentage of subcontracted work. Adjustments in quantities or additional items of work will not require an adjustment of the percentage computed as described above. The Contractor's organization shall be construed to include only those workers on its payroll, employed and paid directly by the Contractor, and equipment owned or rented by the Contractor with or without the operator(s) as is consistent with normal industry practice.

If the Contractor to whom a contract is awarded proposes to subcontract any part of work, the scope and value of the work to be done by the subcontractor shall be outlined. The cost of materials to be used by the subcontractor shall be outlined. The cost of materials to be used by the subcontractor shall be included in the value of the subcontracted work. A subcontractor shall not subcontract further a portion of the work intended to be done by the original subcontractor organization.

All traffic control work and related items shall either be performed entirely by the Contractor's own organization or totally subcontracted. Maintenance of the equipment shall not be subject to this requirement.

When the Contractor has sublet a portion of the Contract or a bid item to a subcontractor, the actual payment to the subcontractor shall be applied to fulfill Disadvantaged Business Enterprise (DBE) requirements of the Contract, where applicable. The cost of a portion of the Contract or bid item performed by a DBE shall be applied against the Contractor to determine if the Contractor is performing at least 50% of the total Contract bid price, as required herein.

The Contractor must obtain written permission from the Engineer for each subcontractor to whom the Contractor intends to subcontract or sublet a portion of the work prior to execution of the subcontract agreement. As a prerequisite to payment for any work done by a subcontractor or on a subcontractor's behalf and prior to any work being done on the Project by the said subcontractor, the Contractor shall submit a certified copy of the Contractor-subcontractor agreement and any and all other contracts with suppliers or any other person, firm, or organization for review and approval by the Engineer. Each subcontract shall be in writing and shall contain and state that all pertinent provisions and requirements of the prime contract are incorporated into the subcontract. It shall be the Contractor's responsibility to determine that all such provisions are included and such provisions shall be implied where not specifically included.

The Contractor may also be required to submit additional information concerning the prospective subcontractor or supplier, including any additional information required by the terms of this Contract, by the Department or by the FHWA, or other governmental agency, where necessary. Such information may include but may not necessarily be limited to:

A. The organization which performs the work is particularly experienced and equipped for such work.
B. Assurance by the Contractor that the Labor Standards Provisions set forth in this Contract shall apply to labor performed on all work encompassed by the Contract.
C. All Civil Rights Provisions and DBE requirements have been satisfied.
D. The Department is indemnified and saved harmless from the action of the subcontractor or supplier.
E. Disputes Resolution Clause is included in the subcontract.
F. Contractor saves harmless and indemnifies the Department for omissions in the Contractor-subcontractor agreement.

Any review performed or permission or approval granted under these Specifications shall not operate, nor be interpreted as approval of the work to be performed by the subcontractor or material supplied by a supplier, nor shall it operate to relieve the Contractor of the sole responsibility for satisfactory completion of the Contract. No contracts, subcontracts, supplier agreements, sales, transfers, leases, assignments, or any other agreements applicable to this Contract shall in any case release the Contractor of its sole responsibility and liability under the Contract and bonds.

The Department, in its discretion, may refuse to pay for all or part of the work or materials or may refuse to accept any work performed by such unapproved subcontractor or materials supplier and may refuse to consider work performed or materials supplied as part of the subcontracted work.

**108.02 Notice to Proceed.** Following the Contract execution, the Engineer may schedule a preconstruction meeting. Prior to the preconstruction meeting, the Contractor shall submit the progress schedule per Subsection 108.04. The Engineer will issue to the Contractor a notice to proceed which will stipulate the date on or before which the Contractor is expected to begin work. The date specified in the notice will be at least ten calendar days subsequent to the date of issuance of the notice to proceed. No work is to be started before receipt of the notice to proceed. The specified Contract time shall begin on the day the work actually starts or on the date stipulated in the notice to proceed, whichever is earlier.

**108.03 Performance and Progress.** The Contractor shall begin work no later than the date stipulated in the notice to proceed.

A. *Calendar Day Contracts.* Contract time will begin as specified in Subsection 108.02 and continue each and every day shown on the calendar until the substantial completion of work as determined by the Engineer. For working on Sundays and holidays, the Contractor shall submit a written request to the Engineer at least three working days prior to the Sunday or holiday for written permission to work on such Sunday or holiday. The Contractor shall provide notice to the Engineer no later than 12 PM Friday if any work is to be performed the next day so that adequate inspection can be provided by the Department.

B. *Working Day Contracts.* Contract time will begin as specified in Subsection 108.02 and continue as specified in Subsection 101.91 until substantial completion of work as

determined by the Engineer. No work will be permitted on Sundays or holidays unless the Engineer determines that such work is in the best interest of the Department. Submit a written request to the Engineer at least three working days prior to the Sunday or holiday for written permission to work on such Sunday or holiday. Provide notice to the Engineer no later than 12 PM Friday if any work is to be performed the next day so that adequate inspection can be provided by the Department.

**108.04 Progress Schedules.** Sufficient materials, equipment, and labor shall be provided by the Contractor to guarantee the completion of the Project within the Contract time.

The Contractor shall submit a progress schedule to the Engineer for review. The Work shall not be started until the progress schedule and methods of construction operations for each phase of construction are acceptable to the Engineer and are in conformance with all applicable erosion and sediment control requirements. The progress schedule shall be used to establish the critical construction operations and to monitor the progress of the work. The progress schedule chart shall be in the form specified below, unless the Contract requires a Critical Path Method (CPM) schedule.

If Contractor elects to use a CPM schedule when it is not required in the Contract, the Contractor shall comply with the requirements of Subsection 108.04, and no additional payment will be made for the CPM schedule.

*A. Progress Schedule Chart (PSC).* The PSC prepared shall show in detail the time (working days or calendar days as specified) involved in performing construction activities for the duration of the Project. The Project shall be scheduled in such manner and sequence as to minimize the time and surface area of erodible earth material. The PSC shall be used for the coordination of work under the Contract including the activities of subcontractors, vendors, and suppliers. The Department will use the PSC to monitor the progress of the work.

The PSC shall show the interdependence of all major work activities required for the complete performance of all items of work under this Contract, including working drawing preparation, submittal, and approval; permits; fabrication and delivery activities; curing time; utility activity; etc. Also, the interdependence of work between separate project locations, if applicable, is to be shown.

The PSC shall include a description of the number of workdays per week, holidays to be taken, number of shifts per day, and number of hours per shift used for the preparation of the schedule.

*B. Preparation of Initial Schedule.* Prior to the Notice to Proceed, the Contractor shall develop the initial PSC and present three copies to the Engineer.

The construction time, as determined by the PSC shall fully use, but not exceed the specified Contract duration. It should be noted that time charges will begin no later than the time stipulated in the notice to proceed. Review and approval of the PSC will not bind the Department or constitute acceptance of any individual time period for scheduled activities.

*C. Biweekly and As-Required Look-Ahead Schedules.* The Contractor shall be required to submit to the Engineer a two-week activity schedule on each Friday for each two-week period. This activity schedule shall provide specific details related to actual construction activities the Contractor plans to have in progress during the two-week period.

When requested by the Engineer, the Contractor shall submit a revised detailed progress schedule showing the remaining work to be completed when requesting an extension of Contract time as specified in Subsection 108.07.

**108.05 Traffic Requirements and Contractor's Operations.** The Contractor shall conduct work at all times in such a manner and in such sequence as will ensure the least interference with traffic. The Contractor shall give due regard to the location of detours and to the provisions for handling traffic. The Contractor shall not open up work to the prejudice or detriment of work already started, and the Engineer may require the Contractor to finish a section on which the work is in progress before work is started on any additional sections.

**108.06 Character of Workers and Equipment.** In the construction of all public works for the State or any political subdivision thereof, or by persons contracting with the State or any political subdivision thereof, preference in employment of laborers, workers, or mechanics shall be given to bonafide legal citizens of the State who have established citizenship by residence of at least 90 days. Each public works contract for the construction of public works for the State or any political subdivision thereof shall contain a stipulation that any person, company, or corporation who violates the provisions of this Section shall pay penalty to the State Treasurer equal to the amount of compensation paid to any person in violation.

The Contractor shall employ only competent and efficient persons. Whenever, in the opinion of the Engineer, any employee is careless or incompetent, obstructs the progress of the work, acts contrary to instructions of the superintendent or foreman, or conducts oneself improperly, the Contractor shall, upon the request of the Engineer, discharge the employee from the work and shall not again employ that person on the Contract or any other contract for the Department, except with the written consent of the Engineer.

All machinery and equipment owned or controlled by the Contractor, that is proposed to be used by the Contractor on the work, shall be of sufficient size and capacity and such mechanical condition as to meet the requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the Project shall be such that no injury to the roadway, adjacent property or other highways results from its use.

When methods and/or equipment to be used by the Contractor in accomplishing the construction are not prescribed in the Contract, the Contractor is free to use any methods and/or equipment that it demonstrates to the satisfaction of the Engineer will accomplish the Contract work in conformity with the requirement of the Contract.

When the Contract specifies that the construction be performed by the use of certain methods and/or equipment, such methods and/or equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method and/or type of equipment other than those specified in the Contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full explanation of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing construction work in conformity with Contract requirements. If, after trial use of the substituted methods and/or equipment, the Engineer determines that the work produced does not meet the Contract requirements, the Contractor shall discontinue the use of the substitute method and/or equipment and shall complete the remaining construction with the specified methods and/or equipment.

The Contractor shall remove the deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made to the unit price for the Contract items involved, nor in Contract time as the result of authorizing a change in methods and/or equipment under these provisions unless it is as a credit or a VEP.

**108.07 Extension of Contract Time.** An extension of the Contract time may be granted by the Department under the following conditions provided documentation has been given to the Engineer. If the Contractor finds that it will be impossible to complete the work on or before the time allowed by the Contract, the Contractor shall, prior to the termination of such time, submit a written request to the Engineer for an extension of time for completion of the Contract. The Contractor shall set forth fully therein the reasons which it considers would justify the request. If requested by the Engineer, the Contractor shall submit a revised detailed progress schedule showing the remaining work to be completed on or before the requested extended completion date. If the Engineer finds that the work was delayed on account of unusual conditions beyond the control of the Contractor, or that the quantities of work done or to be done are sufficiently in excess of the estimated quantities to warrant additional time, the Engineer will grant an extension of time for completion in such amounts as appears to be reasonable and proper. Upon written notice being sent by the Engineer, the new completion time shall be incorporated into and become part of the Contract and shall be binding upon the Contractor and Surety. The Contractor shall not be entitled to any additional time as a result of any delay caused by the Contractor's failure to prosecute the work and/or the Contractor's failure to work in accordance with the progress schedule without valid reason as permitted by these Specifications.

**108.08 Failure to Complete on Time.** For each calendar day or work day that work remains uncompleted after the Contract time has expired or beyond the completion date established by the Contract, the sum specified in Subsection

108.09 will be deducted from any money due the Contractor. This sum shall not be considered and treated as a penalty but as liquidated damages due the Department by reason of inconvenience to the public, added cost of engineering and supervision, and other extra expenditures of public funds due to the Contractor's failure to complete the work on time. Any adjustment of the Contract time for completion of the work granted under Subsection 108.07 will be considered in the assessment of liquidated damages.

The column indicated in the chart as "Calendar Day" will also be used in the assessment of liquidated damages for contracts with a predetermined completion date.

Computations for the assessment of liquidated damages shall be made in accordance with the daily computations described in the definition of working day, when the Contract is a working day contract. On all other contracts each and every consecutive calendar day, including Saturdays, Sundays, and holidays, shall be included in the computations for the assessment of liquidated damages.

The Contractor shall become liable for liquidated damages for delays commencing from the date on which the Contract time, as adjusted by Subsection 108.07, shall expire.

If there is a delay in the delivery of critical materials, such as steel, copper, or aluminum, due to defense needs, energy crisis, etc., a time extension shall be allowed for such delays. Each case will be independently evaluated to determine if the delays were, in fact, beyond the control of the Contractor or fabricator and delayed the Project completion. Satisfactorily supported time extension requests shall be made concurrently with the delay and not after the fact. Requests for time extensions shall be subject to review by the Engineer, and the Engineer will determine the amount of time extension allowed.

There will be no acceptance of unsupported claims of delays in delivery of material as a basis for time extensions. The Contractor is presumed to have included in its Contract price, allowance for any anticipated delays in procurement of materials, which procurement is its sole responsibility. Unless some unusual market condition such as an industry-wide strike, natural disaster, or area-wide shortage arises after bids are taken and prevents procurement of materials within the allowable time limitations, delays in delivery of such materials do not provide sufficient reason for suspending time charges.

Permission for the Contractor or surety to continue and finish work after the Contract time and approved extensions have elapsed shall not waive the Department's rights under the Contract.

The Department may waive such portions of the liquidated damages as may accrue after the work is substantially complete and is in a condition for safe and convenient use by the traveling public.

Payment of liquidated damages will be deducted from payments otherwise due the Contractor or be made by direct payment by the Contractor in the event the total liquidated damages due exceed said deductions.

**108.09 Schedule of Liquidated Damages.** The specific rates for liquidated damages are as follows:

Awarded Contract Value		Daily Charge	
For More Than	To and Including	Work Day	Calendar Day
\$ 0	\$ 25,000	\$ 275.00	\$ 195.00
25,000	50,000	300.00	210.00
50,000	100,000	395.00	270.00
100,000	500,000	710.00	500.00
500,000	1,000,000	825.00	580.00
1,000,000	2,000,000	850.00	595.00
2,000,000	5,000,000	900.00	630.00
5,000,000	10,000,000	950.00	665.00
10,000,000	15,000,000	1,500.00	1,200.00
15,000,000	20,000,000	2,500.00	2,200.00
20,000,000	25,000,000	3,500.00	3,200.00
25,000,000	30,000,000	4,500.00	4,200.00
30,000,000	35,000,000	5,500.00	5,200.00
35,000,000	over	6,500.00	6,200.00

**108.10 Default of Contract.** The Engineer may give notice to the Contractor and the surety, in writing, declaring the Contract to be in default under the following conditions:

A. If the Contractor fails to begin the work within the time specified in the notice to proceed.
B. If the Contractor fails to perform the work with sufficient labor, equipment, and material resources to ensure the prompt completion of the work in accordance with the approved schedule.
C. If the Contractor's work is unacceptable, or if the Contractor refuses to remove materials or perform any such work as shall be determined by the Engineer to be defective or otherwise unacceptable work.
D. If the Contractor discontinues the prosecution of the work or fails to resume the work which has been discontinued.
E. If the Contractor becomes insolvent, declares bankruptcy, commits any acts of bankruptcy or insolvency, or allows any final judgement to stand unsatisfied for a period of ten days.
F. Makes an assignment for the benefit of creditors without authorization by the Department.
G. For any other cause whatsoever, fails to carry on the work in a manner acceptable to the Department.

If the Contractor or surety, within a period of ten days after such notice, does not proceed in accordance therewith, then the Engineer will declare the Contractor to be in default on the Contract, terminate the Contractor's right to proceed with the work, and have full power and authority, without violating the Contract, to take over the prosecution of the work from the Contractor. The Department may appropriate or use the Contractor's materials at the site as may be suitable for use in the Project and may enter into an agreement with another contractor for the completion of the Contract according to the terms and provisions thereof, or use other methods as in the opinion of the Engineer will be required for the completion of the Contract.

All costs and changes incurred by the Department, as a result of the default, including the cost of completing the work under contract or remedying defective or otherwise unacceptable work, and any applicable liquidated damages or disincentives will be deducted from monies due the Contractor for completed work. If such cost exceeds the sum which would have been payable under the Contract, then the Contractor and the surety shall be liable and shall pay to the Department the balance of such costs in excess of the Contract price.

If it is determined, after termination of the Contractor's right to proceed, that the Contractor was not in default, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Department in accordance with Subsection 108.11. Thus, damages to which a Contractor may be entitled as a result of an improper default termination will be limited to amounts as provided for in Subsection 108.11.

**108.11 Termination of Contract.** The Department may, by written order to the Contractor, terminate the Contract or any portion of the Contract when such termination would be in the best interest of the Department. In the event such termination occurs without fault and for reasons beyond the control of the Contractor, all completed items as of the date of termination will be paid for at the Contract price. Payment for partially completed and eliminated work will be paid for as provided in Subsection 109.06.

Acceptable materials, obtained by the Contractor for the work, but which have not been incorporated therein, may, at the option of the Department, be purchased from the Contractor at actual cost delivered to a prescribed location, or otherwise disposed of as mutually agreed.

After receipt of notice of termination from the Department, the Contractor shall submit, within 60 days of the effective termination date, its claim for additional damages or costs not covered above or elsewhere in these Specifications. Such claim may include such cost items as reasonable idle equipment time, mobilization efforts, uncompensated bidding and project investigation costs, overhead expenses attributable to the Project terminated, legal and accounting charges involved in claim preparation, subcontractor costs not otherwise paid for, actual idle labor costs if work is stopped in advance of the termination date, guaranteed payments for private land usage as part of original Contract, and any other cost or damage item for which the Contractor feels reimbursement should be made. The intent of negotiating this claim would be that an adjusted figure be reached with the Contractor. In no event, however, will loss of anticipated profits be considered as part of any settlement.

The Contractor agrees to make its cost records available to the extent necessary to determine the validity and amount of each item claimed.

Termination of the Contract or portion thereof shall not relieve the Contractor of its contractual responsibilities for the work completed, nor shall it relieve the surety of its obligation for and concerning any just claim arising out of the work performed.

**108.12 Termination of Contractor's Responsibility.** The termination of the Contractor's responsibility occurs upon the completion of the work.

## SECTION 109 MEASUREMENT AND PAYMENT

**109.01 Measurement of Quantities.** Work completed under the Contract will be measured by the Engineer according to the modern metric system, SI (System of International Units).

Unless stated otherwise, all material that is to be measured by weight shall be measured as follows:

A. The weight of each load shall be determined by weighing each loaded truck or other approved hauling equipment and then deducting the tare weight of the truck or hauling equipment. The tare weight shall be checked once daily, or as often as directed by the Engineer. Appropriate adjustments shall be made in the use of the tare weight as

directed by the Engineer.
B. The scale platform shall be of such length and width that it will conveniently accommodate all trucks and other approved hauling equipment. The entire vehicle, including its load, must rest on the scale platform and be weighed as one unit.
C. Scales will be certified by the State sealer of weights and measures.
D. Weight tickets showing a net weight of each load of material delivered to the Project will be signed by a Department inspector.

A station when used as a definition or term of measurement will be 1 km.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (such as manholes, utility poles, etc.) having an area of 1 m<sup>2</sup> or less. Transverse measurements for area computations will be the neat dimensions shown on the Plans. Measure structures according to neat lines shown.

For items measured by linear meter, such as pipe, culverts, guardrails, underdrains, etc., take measurements parallel to the base or foundation upon which such structures are placed.

The term metric ton means 1000 kg. Weigh all material measured by weight or proportioned by weight on accurate, approved scales using competent, qualified personnel at locations designated by the Engineer. If materials are shipped by rail, the car weight may be accepted provided that only the actual weight of materials is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic meter may be weighed and such weights will be converted to cubic meters for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used. Bituminous materials will be measured by the liter.

Volumes will be measured at 16 C or will be corrected to the volume at 16 C using ASTM D 1250 for asphalt or ASTM D 633 for tars.

When bituminous materials are shipped by truck or transport, net certified weights or volume subject to correction for loss or foaming may be used for computing quantities.

Cement will be measured by the kilogram.

Timber will be measured by the actual cubic meters incorporated into the structure.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted, but all tolerances will only be accepted if expressed in SI units.

**109.02 Scope of Payment.** The Contractor shall receive and accept compensation provided for in the Contract as full payment for furnishing all materials and for performing work under the Contract in a complete and acceptable manner and for all risk, loss, damage, or expense of every kind arising out of the nature of the work or the performance thereof, subject to the provisions of Subsection 107.13.

If the "Basis of Payment" clause relating to any unit price in the Contract requires that the unit price cover and be considered compensation for certain work or materials essential to the item, this same work or material will not be measured or paid for under any other pay item appearing in the Contract.

Under any Section or item included in the Contract, the Contractor shall be aware that when requirements, responsibilities, and furnishing of materials are outlined in the details and notes on the Plans and in the paragraphs preceding the "Basis of Payment" paragraph in these Specifications or Special Provisions, no interpretation shall be made that there is an exclusion from payment because reiteration is not made in the "Basis of Payment" paragraph. Contractors receiving payments shall, within 30 days of receipt of any payment, file a statement to the Department on a form to be determined by the Department that all subcontractors furnishing labor or material have been paid the full sum due them at that stage of the Contract, except any funds withheld under the terms of the Contract as required by Chapter 8, Title 17 of the Delaware Code, Annotated Revised 1974, and as amended.

**109.03 Compensation for Altered Quantities.** When the accepted quantities of work vary from the quantities in the Contract schedule, the Contractor shall accept payment at the original Contract unit prices for the accepted quantities of work done. No allowance will be made for any increased cost, except as provided in Subsections 104.05, 104.06, 104.07, and 108.11.

**109.04 Payment for Differing Site Conditions, Major Changes, Extra Work, and Force Account.** Differing site conditions, changes, and extra work performed under Section 104 will be paid for using the following methods as appropriate:

- A. Contract unit prices.
- B. Unit prices agreed upon in the change order authorizing the work.
- C. A lump sum amount agreed upon in the change order authorizing the work.
- D. If directed by the Department, work performed on a force account basis is to be compensated in the following manner except as further provided in Subsection 105.21:

1. *Labor.* For all necessary labor and foremen in direct charge of the specific operations, whether the employer is the Contractor, subcontractor, or another, the Contractor shall receive the rate of wage (or scale) actually paid as shown in its certified payrolls for each and every hour that said labor and foremen are actually engaged in such work.

The Contractor shall receive the actual costs paid to, or on behalf of, workers by reason of health and welfare benefits or other benefits, when such amounts are required by collective bargaining agreements or other employment contracts generally applicable to the classes of labor employed on the work.

2. *Bond, Insurance, and Tax.* For bond premiums, property damage, liability, and workers compensation insurance premiums, unemployment insurance contributions, and social security taxes on the force account work, the Contractor shall receive the actual incremental cost thereof, necessarily and directly resulting from the force account work. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.

3. *Materials.* The Department reserves the right to furnish such materials as it deems advisable, and the Contractor shall have no claims for costs and markup on such materials.

Only materials furnished by the Contractor and necessarily used in the performance of the work will be paid for. The cost of such materials shall be the cost to the purchaser, whether Contractor, subcontractor, or other forces from the supplier thereof, together with transportation charges actually paid by the purchaser, except as the following are applicable:

- a. If a cash or trade discount by the actual supplier is offered or available to the purchaser, it shall be credited to the State notwithstanding the fact that such discount may not have been taken.
- b. If materials are procured by the purchaser by any method which is not a direct purchase from a direct billing by the actual supplier to such purchaser, the cost of such materials is the price paid to the actual supplier as determined by the Engineer plus the actual costs, if any, incurred in the handling of such materials.
- c. If the materials are obtained from a supply or source owned wholly or in part by the purchaser, the cost of such materials shall not exceed the price paid by the purchaser for similar materials furnished from said source on items or the current wholesale price for such materials delivered to the job site, whichever price is lower.
- d. If the cost of such materials is, in the opinion of the Engineer, excessive, then the cost of such material is deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned delivered to the Project site, less any discounts as provided in a. above.
- e. If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost will be determined in accordance with d. above.

#### 4. *Equipment and Plant.*

*a. Contractor-Owned Equipment and Plant.* The hourly rates for Contractor-owned equipment and plant will be determined from the applicable volume of the Rental Rate Blue Book (referred to hereafter as the "Blue Book"), published by Machinery Information Division of K-III Directory Corporation, 1735 Technology Drive, Suite 410, San Jose, CA 95110.

The Blue Book will be used in the following manner:

- (1) The hourly rate will be determined by dividing the monthly rate by 176. The weekly, hourly, and daily rates will not be used.
- (2) The number of hours to be paid will be the number of hours that the equipment or plant is actually used on a specific force account activity.
- (3) The current revisions will be used in establishing rates. The current revision applicable to specific force account work is as of the first day of work performed on that force account work and that rate applies throughout the period the force account work is being performed.
- (4) An area adjustment will be made. Equipment life adjustment will be made in accordance with the rate adjustment tables.
- (5) Overtime shall be charged at the same rate indicated in (1) above.

(6) The estimated operating costs per hour will be used for each hour that the equipment or plant is in operation on the force account work. Such costs do not apply to idle time regardless of the cause of the idleness.

(7) Idle time for equipment will not be paid for, except where the equipment has been held on the Project site on a standby basis at the request of the Engineer and, but for this request, would have left the Project site. Such payment will be made at one-half the rate established in (1) and (4) above.

(8) The rates established above include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, all costs (including labor and equipment) of moving equipment or plant on to and away from the site, and all incidentals.

(9) Operator costs are not included in this hourly rate for this equipment.

All equipment shall, in the opinion of the Engineer, be in good operating condition. Equipment used by the Contractor shall be specifically described and be of suitable size and suitable capacity required for the work to be performed. In the event the Contractor elects to use equipment of a higher rental value than that suitable for the work, payment will be made at the rate applicable to the suitable equipment. The Resident Engineer will determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate equipment, the rate paid for the operator is to be that for the suitable equipment.

In the event that a rate is not established in the Blue Book for a particular piece of equipment or plant, the Engineer will establish a rate for that piece of equipment or plant that is consistent with its cost and use in the industry.

The above provisions apply to the equipment and plant owned directly by the Contractor or by entities which are divisions, affiliates, subsidiaries, or in any other way related to the Contractor or its parent company.

*b. Rented Equipment and Plant.* In the event that the Contractor does not own a specific type of equipment and must obtain it by rental, the Contractor shall inform the Resident Engineer of the need to rent the equipment and of the rental rate for that equipment prior to using it on the work. The Contractor will be paid the actual rental rate for the equipment for the time that the equipment is actually used to accomplish the work, provided that rate is reasonable, plus the cost of moving the equipment on to and away from the job. The Contractor shall provide a copy of the paid receipt or canceled check for the rental expense incurred.

5. *Miscellaneous.* No allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

6. *Profit.* Profit shall be computed at 5% of the following:

- a. Total material cost (bare cost not including FOB).
- b. Total direct labor cost (actual hours worked multiplied by regular hourly rate) as provided by Subsection 109.04 D.1.

7. *Overhead.* Overhead is defined to include the following:

- a. All salaries and expenses of executive officers, supervising officers, or supervising employees and all home office expenses;
- b. All clerical or stenographic employees;
- c. All charges for minor equipment, such as small tools, including shovels, picks, axes, saws, bars, sledges, lanterns, jacks, cables, pails, wrenches, and other miscellaneous supplies and services; and
- d. All drafting room accessories such as paper, tracing cloth, and blueprinting.

Overhead costs for Force Account work shall be computed at 10% of the following:

- (1) Total material cost (bare cost FOB).
- (2) Total direct labor cost (actual hours worked multiplied by the regular hourly rate) and benefits as provided by Subsection 109.04 D.1.
- (3) Total Equipment and Plant cost.
- (4) Specific extraordinary overhead expenses, such as hiring of additional supervisory personnel or the use of special type of minor equipment (as defined above), which the Contractor has to purchase specifically for the Force Account, may be allowed. In such instances, the Contractor will be paid only the reasonable costs of such extraordinary overhead expenses provided the Engineer has agreed to such costs prior to their being incurred.

8. *Subcontracting.* For administration costs in connection with approved subcontract work, the Contractor shall receive an amount equal to 5% of the total of such work completed as set forth in 1. through 4. above.

9. *Records.* The Contractor shall maintain force account records in such a manner as to provide a clear distinction between the direct costs of work paid for on a force account basis and the costs of other operations.

From the above records, the Contractor shall furnish the Engineer completed daily force account work reports for each day's work to be paid for on a force account basis. Said daily force account work reports shall be signed by the Contractor and submitted daily. The daily force account work reports shall be detailed as follows:

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman.
- b. Designation, dates, daily hours, total hours, rental rate (including a copy of the Blue Book pages used), and extension for each unit of machinery and equipment.
- c. Quantities of materials, prices, and extensions.
- d. Transportation of materials.
- e. Cost of property damage, liability, and workers compensation insurance premiums; unemployment insurance contributions; bonds; and social security tax.

Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily force account work reports, or if not available, they shall be submitted with subsequent daily force account work reports. Should said vendor's invoices not be submitted within 60 days after the date of delivery of the material, or within 15 days after the completion, whichever occurs first, the Department reserves the right to establish the cost of such materials at the lowest current wholesale prices at which said materials are available, in the quantities concerned delivered to the location of work less any discounts provided in Subsection 109.04 D.3.a.

The Engineer will compare its records with the completed daily force account work reports furnished by the Contractor and make any necessary adjustments. When these daily force account work reports are agreed upon and signed by both parties, said reports become the basis of payment for the work performed, but do not preclude subsequent adjustment based on a later audit by the Department.

The Contractor's cost records pertaining to work paid for on a force account basis shall be open to inspection or audit by representatives of the Department as provided in Subsection 105.19 J.

**109.05 Basis of Payment for Fixed Quantity Items.** When indicated on the Plans or in the Special Provisions, certain items will be paid for on an estimated fixed quantity item basis. Where this occurs the method of measurement and basis of payment indicated in these Specifications for such items are deleted.

When estimated fixed quantities are indicated, the only quantities for which payment will be made are the estimated quantities as shown in the proposal at the unit prices bid.

The bidder should check the estimates and make its own appraisal of the amount of labor, equipment, or material required to complete the work in accordance with the Plans and Specifications. No allowance will be made or claims considered for any quantities used in completing the work in excess of those given in the proposal unless changes due to conditions encountered during construction become necessary and are authorized in writing by the Engineer. In such cases additions or deductions will be made to or from the proposal quantities for the actual volume or amounts charged, with payment adjusted in accordance with the bid price of the item.

If estimated fixed quantity items are deleted completely, no payment will be made.

In cases where it can be shown that the quantities indicated in the proposal are in error by more than 5%, additions or deductions will be made in excess of or deficient of the 5%, with payment adjusted in accordance with the bid price of the item.

**109.06 Eliminated Items.** Should any items contained in the Contract be found unnecessary for the completion of the work, the Engineer may, upon written order to the Contractor, eliminate the items from the Contract. The elimination of these items shall not invalidate the Contract. When the Contractor is notified of the elimination of items, the Contractor will be reimbursed for the actual work done and all actual costs incurred. Reimbursement of materials actually purchased prior to notification of the elimination of items will be paid for at the actual cost of the materials plus 15%. Such materials shall become the property of the Department. In no event will reimbursement for an eliminated item

exceed the extended amount of the Contract item. Also, in no case will the Contractor be reimbursed for the loss of anticipated profit.

**109.07 Partial Payment.** The Engineer will once in each month make an estimate, in writing, of the total amount of work done on the Contract and the value thereof to the date of such estimate. Five percent of the value of the work done as indicated by the estimate shall be retained as security for fulfillment of the Contract until a total of 5% of the total bid price has been retained. Securities may be substituted for this retainage in accordance with Section 6919, Chapter 69, Title 29 of the Delaware Code and as amended. Payment of estimates, except final estimates, shall not exceed those shown on the proposal except those authorized by change order. No such estimates or payments shall be required to be made when in the judgment of the Engineer the work is not proceeding in accordance with the provisions of the Contract, or when in the Engineer's judgment the total value to the work done since the last estimate amounts to less than \$3,000.00. The Engineer, if it deems it expedient to do so, may cause estimates to be made more frequently than one in each month and payments thereon to be made more frequently to the Contractor.

**109.08 Payment for Material.** When approved by the Engineer, partial estimates may include an allowance for the value of tested and acceptable materials of a non-perishable or non-contaminate nature which have been produced or furnished in a condition ready for incorporation as a permanent part of work yet to be completed, provided the following terms and conditions are met:

A. *Request.* The request for payment allowance for properly stored materials must be in writing, accompanied by an itemized inventory statement, written consent of the surety, and documentation of prepayment for the materials.

No payment allowance will be permitted for amounts less than \$25,000.00 for each material of a qualifying Contract item.

B. *Materials.* An allowance of 100% of the cost to the Contractor for materials, not to exceed 90% of the Contract item price, may be made when such material is delivered and stockpiled or stored in accordance with the requirements specified herein.

Prior to such allowance, all such material shall have been tested and found acceptable to the Engineer.

Payment shall not be allowed in excess of the quantity required for the Contract. The required quantity shall be based on the Contract bid quantities and approved revisions.

C. *Excluded Materials.* No allowance shall be made for fuels, form lumber, falsework, temporary structures, or for other materials of any kind which will not become an integral part of the finished construction.

No allowance shall be made for cement, aggregate, sand, seed, plants, fertilizer, or other perishable or contaminate items, nor for materials which, in the opinion of the Engineer, have an unacceptable shelf life, environmental, or safety restriction.

D. *Storage.* All materials shall be stored in an approved manner and in areas where damage is not likely to occur. The material stored shall be dedicated to the Project.

When it is determined impractical to store materials within the limits of the Project, the Engineer may approve the storage of materials on private property or, for structural members, in the manufacturer's or fabricator's yard. Requests for payment for such material stored outside the limits of the Project shall be accompanied by a release from the owner and/or tenant of such property or yard agreeing to permit the removal of the materials from the property without cost to the State.

E. *Materials Inventory.* Materials shall be available for inspection and inventory at the storage site by the Engineer or its authorized representative at all times.

*F. Materials Measurement and Payment.* The method of measurement for materials shall be in units which are easily inventoried and acceptable to the Engineer.

Payment allowance for materials shall be included in the progress estimate as a new and separate item and shall be subject to retainage provisions.

As the materials are incorporated in the Project and paid for in place, an equal percentage shall be deducted from progress estimates until 100% of the allowance has been deducted. At the conclusion of the work for which the materials are required, the cost of materials remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

**109.09 Retainage of Funds.** Whenever liquidated damages are assessable, such damages shall be deducted from the monthly and final estimate. The payment of any current or final estimate or of any retained percentage shall in no way affect the obligation of the Contractor to repair or renew any defective parts of the construction and to be responsible for all damage due to such defects.

If at any time there is evidence of any lien or claim for which, if established, the Department might become liable, and which is chargeable to the Contractor, the Department shall have the right to retain out of any payment then due or to become due an amount sufficient to completely indemnify the Department against such lien or claim. If there should prove to be any such claim after all payments are made, the Contractor shall refund to the Department all monies that the Department may be compelled to pay in discharging any lien made obligatory in consequence of the Contractor's neglect or default.

Upon substantial completion of the work under the Contract, the Engineer may release 60% of the amount then retained. The balance of the amount retained will be held until all reports required of the Contractor are received and final payment is authorized by the Department. The Department may, at its option, retain temporarily or permanently a smaller amount and may cause the Contractor to be paid temporarily or permanently, from time to time, such portion of the amount retained as it deems equitable.

No provision contained in these Specifications shall be construed as creating any debt, liability or obligation on the part of the State or Department to any subcontractor, supplier, or materialman.

**109.10 Final Payment.** The Engineer will, as soon as practicable after the completion of the Contract, make a final estimate of the work done thereunder and the value of such work, and the Department shall pay the entire sum found to be due after deducting from all previous payments all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments shall be subject to correction in the final estimates payment.

The acceptance by the Contractor of the last payment, as aforesaid, shall operate as and shall be a release to the State, the Department, the Director, and its agents from all claims of liability under the Contract, or for anything done or furnished or relating to the work under the Contract, or for any act or neglect of the State, the Department, the Director, or its agents relating to or connected with the Contract.

**109.11 Source of Supply and Carrier Rates on Construction Materials.** Bidders must fully inform themselves as to the source of supply of acceptable materials needed for the work and in regard to the carrier rates and transportation facilities for these materials before submitting proposals.

Inability to secure satisfactory materials from the source upon which the bid was based, or changes in carrier, or the alteration of transportation facilities for these materials during the life of the Contract, shall not constitute cause for claim for extra compensation.

**109.12 Transportation Tax Exemption.** All unit prices shall be based on exemption from any transportation tax for which the State is, by law, exempt on materials entering into and forming a part of the Project.

In order for the Contractors to take advantage of the exemption from payment of the tax on transportation and to have the construction materials consigned to the State, in care of itself, the Contractor shall furnish the supplier with a statement certifying that the Contractor has been authorized to claim the exemption, identifying the Contract in which the authorization was given and instructing the supplier to make the shipment involved free of tax.

**109.13 Asphalt Cement Cost Adjustment.** For all Sections within Division 400, payments to the Contractor will be adjusted to reflect increases or decreases in the Delaware Posted Asphalt Cement price when compared to the Project Asphalt Cement Base price, as defined in the bid proposal.

The Delaware Posted Asphalt Cement Price will be issued weekly by the Department and will be the industry posted price for Asphalt Cement, F.O.B. Philadelphia, Pennsylvania.

The Project Asphalt Cement Base price will be the anticipated Delaware Posted Asphalt Cement Price expected to be in effect at the time of receipt of bid.

All deviations of the Delaware Posted Asphalt Cement Price from the Project Asphalt Cement Base Price are eligible for cost adjustment. No minimum increase or decreases or corresponding percentages are required to qualify for cost adjustment.

Actual quantity of asphalt cement qualifying for any Asphalt Cement Cost Adjustment will be computed on the basis of weight tickets and asphalt percentage from the approved job mix formula. For Recycled Hot-Mix the asphalt percentage eligible for cost adjustment shall be only the new asphalt cement added to the mix.

There shall be no separate payment for asphalt cement. That cost shall be included in the various unit prices bid per metric ton for those bid items that contain asphalt cement.

If the Contractor exceeds the authorized allotted completion time, the price of asphalt cement on the last authorized allotted work day shall be the price used for cost adjustment during the time liquidated damages are assessed. The Project Asphalt Cement Base Price shall be determined by the Department and shall be set forth in the Special Provisions for each project.

## **SECTION 110 EROSION, SEDIMENT CONTROL, AND WATER POLLUTION**

### **110.01 Definitions.**

*Clearing.* The clearing of trees, brush, shrubs, downed timber, rotten wood, rubbish, and any other vegetation, except where excluded by the definition for grubbing, as well as the removal of fences and structures. See Subsection 201.01.  
*Disturbed Area.* An area where any activity has been initiated which may result in soil erosion from water or wind or movement of sediments or pollutants into state waters or onto lands in the state, or which may result in accelerated stormwater runoff, including, but not limited to, clearing, grubbing, grading, excavating, transporting, filling, and backfilling of land.

*Grubbing.* Shall mean the removal from the ground of trees, stumps, roots, brush, root mat, and debris.

*Phasing.* Staged construction sequencing as shown on the erosion and sediment control plans and the maintenance of traffic plans.

**110.02 Legal Authority.** The Department is a delegated agency of the DNREC as defined in Chapter 40, Title 7 of the Delaware Code and the Delaware Sediment and Stormwater Regulations. Any project built under the Contract documents shall maintain compliance with the aforementioned law and regulations at all times throughout the life of that project. As a delegated agency, the Department may enforce compliance with the law and regulations through the Contract documents or may refer a project to the DNREC for enforcement action.

**110.03 Sediment and Stormwater Permit Approval.** A signature, date, and seal in the Stormwater Engineer's block on the title sheet of the Plans indicates that the Plans were designed in conformance with the applicable State and Federal stormwater regulations and that the Sediment and Stormwater Permit is approved. All work shall be completed pursuant to the Plans.

Review and approval of the erosion, sediment control, and water pollution control plan or errors and omissions in the Plans shall not relieve the Contractor from its responsibilities for compliance with the Delaware Sediment and Stormwater Regulations or other applicable laws or regulations and the more stringent water pollution control requirements shall apply.

**110.04 Description of Work.** Erosion and sediment control measures shall be applied to erodible earth material exposed by any of the Contractor's land disturbing activities on the Project. The work shall consist of the application of temporary and permanent erosion and sediment control items as provided in the Contract or ordered by the Engineer. The temporary erosion control items shall be coordinated with the permanent erosion control items specified. The items shall include, but are not limited to, the use of berms, dikes, dams, sediment basins, traps, geotextiles, stone check dams, silt fences, phased construction, special land grading methods, mats and nets, aggregates, mulches, grasses,

slope drains, chemical binders, tackifiers, and other erosion and sediment control items or approved methods as designated in the Contract documents or as directed by the Engineer.

**110.05 Completion of the Work.** This Subsection sets forth the methods of construction operations, progress schedules, and construction phasing, staging, and sequencing for the completion of temporary or permanent erosion and sediment control work.

The Contractor shall implement the temporary and permanent erosion control items for each phase of construction as detailed in the Contract documents. Additional erosion and sediment control items may be required from time to time during the life of the Project as deemed necessary by the Engineer in order to provide continuous erosion and sediment control protection.

Before starting each phase of any land-disturbing activity, the Contractor shall make certain that all erosion and sediment control items required in that phase are installed and functional.

*A. Construction Phasing.* For Project sites in excess of 8 ha, the construction must be phased in 8 ha increments. Once grading is initiated in one 8 ha increment, a second 8 ha increment may be cleared and grubbed provided the Contractor installs and maintains effective erosion and sediment control measures on both sections in such quantities and locations as deemed acceptable by the Engineer.

When balancing earthwork, such as when borrow from a cut is used as fill at a noncontiguous location distant from the cut, more than a total of 8 ha may be allowed to be grubbed and graded within the overall limits of the Project at any one time with prior written approval from the Engineer. In such cases, one 8 ha increment in cut and one 8 ha increment in fill may be grubbed and graded at each separate location concurrently. Examples of when this would likely occur would be on interchange construction or on a new alignment.

The Engineer may further limit the area of clearing, grubbing, stripping, and grading operations to the Contractor's capability and actual progress of keeping the finish grading, mulching, seeding, and other temporary or permanent erosion control measures current according to the approved progress schedule and construction sequence.

*B. Construction Sequence.* The Contractor shall sequence the construction to comply with the following constraints unless indicated otherwise on the Plans:

1. Implement temporary erosion and sediment control items prior to any operation which exposes soil to erosion, such as during the clearing portion and prior to the grubbing portion of each phase of construction.
2. Schedule and perform the clearing and grubbing operations so that grading operations and permanent stabilization can follow immediately thereafter. Once earthwork has begun, the operation shall be continuous from clearing and grubbing through to completion of grading and final stabilization in accordance with Subsection 110.09 A.2. Any interruption in these operations in excess of 14 calendar days must be approved by the Engineer and shall require interim stabilization in accordance with Subsection 110.09 A.1.
3. Vegetatively stabilize bare soil areas in each phase of construction in accordance with Subsection 110.09 A.1. prior to advancing the work into the next phase of construction.
4. Vegetatively stabilize all cut and fill slopes of the highway excavation and embankment as the work progresses in height increments not to exceed 3 m measured along the slope surface.
5. Excavate roadside ditches as early in the Project as possible to establish good drainage.

6. Vegetatively stabilize all grass ditches, swales, and medians within seven calendar days after their initial excavation.

7. Remove temporary erosion and sediment controls after final stabilization is complete in accordance with Subsection 110.09 A.2. Return land contours to original grade or as indicated on the Plans, and vegetatively stabilize any remaining bare soil areas.

**110.06 Plan Changes.** The Contractor shall not deviate from the Plans without prior review and approval by the Engineer and appropriate regulatory authorities. Those portions of the Plans which are normally covered by environmental permits include, but are not limited to, erosion and sediment control, stormwater management, construction sequencing, stream diversions, and site dewatering.

For plan changes initiated by the Contractor, revised construction Plans shall be submitted for review and approval by the Engineer. The revised Plans shall be prepared in accordance with current Department standards for roadway design, traffic control, erosion and sediment control, and stormwater management. Revised Plans shall also conform to all applicable Federal, State, or municipal pollution control laws, rules, or regulations. All supporting design calculations and cost analyses required by the Engineer shall accompany the submission. The number of copies required to be submitted for review shall be determined by the Engineer depending on the nature of the proposed revision. Contractor proposed revisions to the Plans, as well as review time by the Department, will not justify a delay in the progress schedule. All costs involved in preparing plan revision documents for changes proposed by the Contractor shall be the responsibility of the Contractor.

**110.07 Limits of Construction.** The Contractor shall not perform any work including, but not limited to, clearing, grubbing, construction phasing, equipment storage, and material stockpiling outside the limits of construction shown on the Plans without prior approval of the Engineer.

If the Contractor should require additional lands which are not within Department rights-of-way or easements, it shall be the Contractor's responsibility to make all arrangements with the property owners and to acquire all permits from the appropriate regulatory authorities for the use of these lands.

The Contractor shall acquire a statement signed by the property owners which releases the Department from all claims arising from the use of the property being considered. The signed statement from the property owner and copies of all permits acquired by the Contractor shall be transmitted by the Contractor to the Engineer for the Engineer's records prior to initiating any operation on the property being considered for use.

**110.08 Site Reviewer.** A Site Reviewer shall be a person from the Contractor's staff assigned to erosion and sediment control implementation and maintenance and shall be required on specific projects as noted in the Plans. The name and DNREC certification number of each Site Reviewer so required shall be submitted to the Department at the time of bid.

110.09 Vegetative Stabilization.

*A. Interim and Final Stabilization.* An area of the work shall be considered vegetatively stabilized for erosion control if it meets the criteria in one of the following two cases:

1. *Interim Stabilization.* The seeding and mulching items, sod, or erosion and sediment control items as noted on the Plans are in place and accepted by the Engineer.

2. *Final Stabilization.* Meets the requirement for the removal of the temporary erosion controls placed during interim stabilization and complete growth of vegetation has occurred to the satisfaction of the Engineer. Complete growth of vegetation includes permanent grass reaching a height of 75 mm over all areas seeded.

*B. Incremental Stabilization.* Side slopes, and other slopes 1:3 (vertical to horizontal) or steeper require placement of either temporary or permanent seeding and mulching as the work progresses in height increments not to exceed 3 m measured along the slope surface.

*C. Tracking of Slopes.* During grading operations the Contractor shall track all slopes 1:3 (vertical to horizontal) or steeper to prevent gully and sheet erosion. The tracking shall be accomplished by driving cleated equipment such as a bulldozer up and down the slopes so the cleats make horizontally oriented indentations in the soil. All costs associated with tracking of slopes at regular increments shall be incidental to Section 202.

Prior to applying seeding items on slopes 1:3 (vertical to horizontal) or steeper, the Contractor shall track the slopes as described above in order to prepare a stable seedbed. All costs associated with tracking of slopes to prepare a seedbed shall be incidental to the seeding item being applied to the slope surface.

*D. Maximum Soil Exposure Times.* All erodible earth material exposed by the Contractor's activities shall be vegetatively stabilized within the time frames specified below:

Location	Maximum Time to Vegetatively Stabilize
Sediment controls (berms, ditches, traps, basins, etc.)	Seven calendar days from initial construction
Areas meeting final grades	Seven calendar days from completion of grading
Areas not meeting final grades	Fourteen calendar days from ceasing work in that location

**110.10 Temporarily Stockpiled Material.** Erodible earth material designated on the Plans or required by the Engineer to be excavated and temporarily stockpiled for later use in the Project shall be located away from live streams and wetlands, kept within Department rights-of-way and easements, and placed only in areas deemed appropriate by the Engineer.

The Contractor shall install the erosion and sediment control items designated on the Plans or as directed by the Engineer about the base of the pile in advance of the actual stockpiling operation. Erodible earth material shall be placed in piles of neat conformations. Side slopes shall be seeded and mulched as the pile is placed in height increments of 3 m measured along the slope surface. All remaining unstabilized surfaces shall be seeded and mulched immediately following completion of the stockpiling operation.

If the Contractor proposes to stockpile erodible earth material in areas not designated on the Plans for such use, it shall be the Contractor's responsibility to prepare and submit for approval by the Engineer erosion and sediment control plans for those proposed areas which are located within Department rights-of-way and easements. Materials shall not be stockpiled until an erosion and sediment control plan for the proposed stockpile has been approved by the Engineer. If the Contractor proposes to stockpile erodible earth material in areas outside of Department rights-of-way and easements, it shall be the Contractor's responsibility to prepare and submit for approval a plan for the use of the proposed site to the appropriate agencies having jurisdiction. No stockpiling operation shall commence in areas outside the Department rights-of-way and easements until the Engineer has received copies of all plans approved by the appropriate regulatory agencies and received copies of statements signed by the property owners, as required under Subsection 110.07, which release the Department from any claims arising from the use of the property.

**110.11 Channel and Ditch Scour Protection.** Riprap or other proposed channel lining items designated on the Plans at pipe, culvert, and bridge inlets and outlets and along channel lengths shall be placed before the pipes, culverts, bridges, and channels become operational.

**110.12 Sediment-Laden Runoff.** Stormwater runoff from disturbed areas shall be directed to an approved sediment control measure, such as a trap or basin, prior to release to ditches, storm drain systems, streams, or surface water bodies of any type. All storm drain pipes which convey sediment-laden runoff shall discharge to a sediment trap or sediment basin prior to release from the Project limits of construction as shown on the Plans, or as directed by the Engineer.

**110.13 Dewatering Operations.** The Contractor shall not pump or otherwise withdraw water from below the water table at a rate exceeding 189 270 L per day without having first obtained the necessary water allocation and well permits. The Contractor is responsible for obtaining all permits required from the appropriate issuing authority for the withdrawal of groundwater from the Project site. Costs associated with water allocation and water well permit acquisition shall be paid by the Contractor. The Contractor shall submit copies of all permit approvals to the Engineer for the Engineer's records.

Sediment-laden dewatering discharge shall be directed to an approved sediment trapping device such as a dewatering basin, portable sediment tank, sediment trap, or sediment basin, prior to release to ditches, storm drain systems, streams, or surface water bodies of any type.

Prior to initiating a pumping operation to remove water from open excavations or temporary cofferdams, the area to be dewatered shall be allowed to rest undisturbed under quiescent conditions for a period of 12 hours in order to induce physical settling of suspended particles.

The Contractor shall attach the suction line of the pumping equipment to a flotation device, immersing the intake end no more than 150 mm below the water surface. In this manner, water shall be "skimmed" off the surface. Once the water level has been pumped down, further dewatering shall be accomplished in conjunction with a sump pit constructed in conformance with Department standards or as directed by the Engineer.

**110.14 Clean Water Diversions.** Stormwater runoff from non-disturbed areas shall be directed away from work areas using any combination of dikes, swales, and slope drains or as shown on the Plans, or as directed by the Engineer.

**110.15 Stream Diversions.** The Contractor shall not conduct work in a stream without having first obtained the appropriate wetland and subaqueous lands permit(s).

When work is to be conducted in the flow line of a stream, whether the stream is perennial or intermittent, the Contractor shall use any combination of dikes, swales, ditches, cofferdams, pipes, pumps, and other devices as shown on the Plans, or as directed by the Engineer to direct the stream flow around the work area.

**110.16 Temporary Stream Crossings.** Equipment shall not be operated in live streams without a stream diversion being installed to the satisfaction of the Engineer. Temporary bridges or other structures shall be installed if the work requires the crossing of a stream by construction equipment.

**110.17 Wash Water.** Water containing sediment from any construction activity on the Project such as saw cutting, milling, aggregate washing, and equipment washing and which is not regulated as a waste water under State or Federal statutes shall be discharged to a sediment trapping device and treated by filtration or settling. Sediment-laden wash water shall not be discharged directly to any stream or waterbody of any type.

**110.18 Waste Water.** Water containing pollutants such as raw sewerage, bitumens, fuels, lubricants, paint, or other harmful materials, is strictly regulated under State and Federal statutes and as such shall not be discharged into waters of the State as defined in Chapter 60, Title 7 of the Delaware Code or into natural or manmade channels or storm drain systems leading to waters of the State.

The Contractor is responsible for obtaining all permits required from the appropriate issuing authority for the discharge of waste waters from the Project site. Costs associated with waste water permit acquisition shall be paid by the Contractor. The Contractor shall submit copies of all permit approvals to the Engineer for the Engineer's records.

**110.19 Water Pollution Violations Enforced.** If a water pollution control violation exists on the Project which in the Engineer's judgment poses a public health or safety risk, such as a fuel or chemical spill or release of raw sewerage, the Engineer may refer the violation to the DNREC for immediate enforcement action. The cost of clean up shall be the sole responsibility of the Contractor if the DNREC investigation reveals the Contractor's actions caused the violation.

**110.20 Maintenance.** Erosion and sediment control items shall be maintained during the construction season as well as the winter months and other times when the Project is closed down. The Contractor shall inspect the Project site immediately after each rain and repair, replace, or maintain any erosion and sediment control item promptly as needed or as directed by the Engineer. Any eroded surface shall be stabilized, and any accumulated sediment not trapped by a control measure shall be removed and disposed of in an approved stockpile area or hauled off-site. Access shall be maintained to all sediment control devices until construction phasing and stabilization allow the removal of those controls that are no longer required.

Costs associated with repairing, replacing, and maintaining the erosion and sediment control items are incidental to the initial construction of each item. Sediment removal will be paid for separately under Section 250.

**110.21 Erosion and Sediment Control Reports.** The Department will provide the Contractor with erosion and sediment control reports on a regular basis. The reports will itemize work required to maintain compliance with the Contract. The Contractor shall complete the items of work listed by the completion dates indicated on the reports.

**110.22 Failure to Implement and Maintain Erosion and Sediment Control Measures.** Controlling erosion and sedimentation is the Contractor's responsibility under the Contract. If the Contractor fails at any time to implement and maintain the required erosion and sediment control provisions of the Contract, the Engineer will notify the Contractor, orally or in writing, to comply with the required erosion and sediment control provisions. If the Contractor fails to perform the work as directed by the Engineer, the Engineer may take the following actions in the order listed below to gain compliance with the Contract.

A. *Stop Work Order.* If the Contractor continues to fail to implement and maintain the erosion and sediment controls after oral or written direction to do so by the Engineer, or continues not to follow the approved construction phasing, sequencing, and progress schedule, the Engineer may order a "Shut-Down" of all land-disturbing activities except those necessary to bring the site into compliance with the Contract. The Engineer will establish a time frame for completion of the erosion and sediment control work.

If the unsatisfactory construction procedures and operations are not corrected promptly after the initial "Shut-Down", the Engineer may suspend the performance of other construction until all items of work on the erosion and sediment control reports are complete and accepted.

No claims for additional time or money shall be considered due to "Shut-Downs" resulting from the Contractor's failure to implement and maintain the required erosion and sediment control items or failure to follow the approved construction phasing, staging, sequencing, and progress schedule required by the Contract documents.

B. *Withhold Progress Payment.* If the Contractor fails to bring the erosion and sediment controls into compliance with the Contract documents or fails to proceed in accordance with the approved construction phasing, staging, and sequencing after oral or written direction from the Engineer to do so and after a "Shut-Down" of all land-disturbing activities, then no monthly estimate or payment will be made. No payment will be made until all items of work on the erosion and sediment control reports are complete and accepted.

C. *Deduct Cost of Work Completed By Others.* If the Contractor fails to remedy unsatisfactory conditions within the time frame established and after all land-disturbing activities have been shut down and payment has been withheld, then the Engineer may proceed with adequate forces and equipment to implement or maintain the erosion and sediment control items necessary to bring the Project into compliance with the Contract documents. The entire cost of this work for engaging an on-call contractor and administering the on-call contractor will be deducted from monies due the Contractor on the Contract.

D. *Default of Contract.* More than one "Shut-Down" for erosion and sediment control noncompliance may be considered as a failure to perform the terms of the Contract and will be grounds for finding the Contractor in default of the Contract in accordance with Subsection 108.10. If the Contractor defaults on the erosion and sediment control provisions of the Contract, the Project will be referred to the DNREC for enforcement action.

**110.23 Contractor Payment.** Payment will be made at the unit prices bid for the quantities of the various erosion and sediment control items provided in the Contract which are installed by the Contractor and accepted by the Engineer. Any additional work or corrections brought about by errors by the Contractor such as nonconformance with the Contract documents and the construction phasing, staging, or sequencing will be made at the Contractor's expense.