SPECIAL PROVISIONS

ROUTE 93 DRAINAGE IMPROVEMENTS
From Oakdene Avenue to Christie Heights Street

Contract No. 002950712
Grading, Drainage & Resurfacing
Borough of Leonia, Bergen County

AUTHORIZATION OF CONTRACT

The Contract for this Project is authorized by the provisions of Title 27 of the Revised Statutes of New Jersey and supplements thereto, and Title 23 of the United States Code - Highways.

SPECIFICATIONS TO BE USED

The 2001 U.S. Customary English Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation as amended herein will govern the construction of this Project and the execution of the Contract.

These Special Provisions consist of the following:

Pages 1 to 87 inclusive for General, Road, and Bridge Provisions.

State of New Jersey Equal Employment Opportunity for Contracts Funded by Wholly State Funds, pages 1 to 4 inclusive, dated April 2003.

Payroll Requirements for 100 Percent State Projects, dated December 1986, revised September, 1992.

Americans with Disabilities Act for 100 Percent State Funded Contracts, page 1, dated August 1993.

Equal Employment Opportunity Special Provisions Construction Contracts Funded by Wholly State Funds, pages 1 to 10 inclusive, dated April 2003.

Small Business Enterprise Utilization Attachment for 100% State Funded Contracts, pages 1 to 6 inclusive, dated March 2004.

Minority/Female Outreach and Training Program for Wholly State Funded Projects attachment, dated September 7, 1999.

The Contractor shall pay the minimum wage rates determined by the New Jersey Department of Labor.

State wage rates may be obtained from the New Jersey Department of Labor (Telephone: 609-292-2259) or by accessing the Department of Labor's web site at http://www.nj.gov/labor/lsse/lspubcon.html The State wage rates in effect at the time of award will be made a part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, *et seq.*).

In the event it is found that any employee of the Contractor or any subcontractor covered by the Contract, has been paid a rate of wages less than the minimum wage required to be paid by the Contract, the State may terminate the Contractor's or subcontractor's right to proceed with the Work, or such part of the Work, as to which there has been a failure to pay required wages and to prosecute the Work to completion or otherwise. The Contractor and its sureties shall be liable to the State for any excess costs occasioned thereby.

DIVISION 100 - GENERAL PROVISIONS

SECTION 101 - GENERAL INFORMATION

101.03 Terms.

THE FIRST SENTENCE IS CHANGED TO:

When the following terms are used in the Contract Documents, the intent and meaning shall be strictly construed as follows:

THE FOLLOWING TERMS ARE ADDED:

ADDITIONAL COMPENSATION. A monetary payment(s), sought by the Contractor, premised upon (1.) an adjustment or modification to the Contract pay item(s) for particular work or (2.) any or all forms of compensation over and above that which is specifically provided under the various individual Contract Pay Items or Contract payment provisions.

COMPLETION OF THE CONTRACT. The event termed "Completion of the Contract", under the Specifications and the Contractual Liability Act NJSA 59:13-1 *et seq.,* shall be deemed to have occurred as of the date the Contractor accepts or accepts with reservation of specific claims, in writing in accord with forms supplied by the Department, the Final Certificate issued by the Department or the 31st day after issuance of said Final Certificate by the Department, whichever event may be the first to occur.

CLAIM. The Contractor has reason to believe it is entitled to additional compensation and/or an extension of contract time, in accordance with and subject to the Contract Documents and the provisions of the Contractual Liability Act, N.J.S.A. 59:13-1 *et seq*., arising out of or relating to the happening of an event, thing or occurrence or an act or failure to act by the Engineer. A claim accrues when it arises, meaning when a situation or occurrence takes place or comes about which has or possesses the potential to support or become the basis for additional compensation and/or an extension of time.

DISPUTE (AS TO A CLAIM). A disagreement between the Department and the Contractor with regard to the Work or Contract Documents arising out of a claim by the Contractor for additional compensation or an extension of time.

FINAL CERTIFICATE. It is the final payment document that sets forth the total amount payable to the Contractor, including therein an itemization of said amount segregated as to Pay Item quantities, Extra Work, and any other basis for payment; it also includes therein any retainage to be released and all deductions made or to be made from prior payments as required pursuant to the provisions of the Contract Documents, which may result in either a Final Payment to the Contractor or a Credit (payment) due the Department.

NON-BINDING MEDIATION. The fourth and final step in the Department's Contractual Claim Resolution Process for claims arising under the Contract utilizing a non-binding mediation forum wherein an independent mediator is engaged in an attempt to resolve a claim presented by a Contractor.

PARCEL. Property to be acquired for transportation purposes, described by metes and bounds.

SECRETARY, DEPARTMENT CLAIMS COMMITTEE. The individual employed by the Department who gathers information and provides administrative assistance to the members of the Department Claims Committee. This individual is the conduit between the Department Claims Committee members and the Contractor. Contact by the Contractor regarding any issue involving the Claims Committee or Mediation shall be through the Secretary.

THE FOLLOWING TERMS ARE CHANGED:

DEPARTMENT CLAIMS COMMITTEE. A contractual body available to review and resolve claims that arise under the Contract. The Committee consists of three voting members with the Director of Design Services as the chairperson, one member is the Department's Chief Financial Office, and one member is selected from the other

directors within Capital Program Management. Additional non-voting members are a Deputy Attorney General, the Secretary of the Department Claims Committee, and a member of the Federal Highway Administration (for federally funded projects).

DESIGN UNIT. The term "Design Unit" means the Department's consultant engineering firm, the in-house design unit(s), or both that prepared the Contract Documents for a project. The design unit(s) for any particular project shall be as designated by letter to the awarded Contractor.

EXTREME WEATHER CONDITIONS. When, solely as a result of adverse weather, the Contractor is not able to work, the Contractor is entitled to claim that progress of the Work has been affected by extreme weather conditions and may seek an extension of Contract Time consistent with the provisions of Subsection 108.11.

HOT MIX ASPHALT (HMA) PAVEMENT. The combination of base course, intermediate course, and surface course of hot mix asphalt.

ON-DUTY POLICE. The term "on-duty" with regard to municipal police shall mean that the work of providing traffic safety services shall be an extension of regular employment for, and sanctioned by, the municipality, even if it is on an overtime pay rate basis. The municipal police, while so working, shall be covered by the municipality's liability insurance coverage; and must have successfully completed a traffic safety program approved by the Department.

PAVEMENT STRUCTURE. The combination of surface, intermediate and base courses, and when specified, a subbase course, placed on a subgrade to support the traffic load and distribute it to the roadbed (see Figure 101-1). These various courses are defined as follows:

1. *Surface Course*. One or more layers of specified material of designed thickness at the top of the pavement structure.
2. *Intermediate Course*. One or more layers of specified material of designed thickness placed on the base course.
3. *Base Course*. One or more layers of specified material of designed thickness placed on the subgrade or subbase.
4. *Subbase*. One or more layers of specified material of designed thickness placed on the subgrade.

PLANS. The approved plans, profiles, typical sections, cross-sections, approved working drawings, and supplemental drawings, or exact reproductions thereof, which show the location, character, dimensions, quantities, and details of the Work to be done. This includes the latest version of all Standard Construction Details in effect at the time of Advertisement. Certified working drawings are not plans and not part of the Contract Documents.

PROPOSAL: The term "Proposal" means the offer of a Bidder, properly signed and guaranteed, to perform the Work for the prices quoted therein.

PROPOSAL FORM: The term "Proposal form" means the Department approved proposal form produced from the Expedite software downloaded from the Department's Bid Express web site at http://www.bidx.com, prepared and submitted for the Work.

REGIONAL DISPUTE BOARD. A three-member Board, comprised of one member from the Division of Project Management, one member from the Bureau of Construction Engineering, and the Regional Construction Engineer (Chairperson), that is available under the terms of the Contract to review Disputes which have not been resolved by the Resident Engineer.

REMEDIATE. The term "remediate" means the process that is approved by the New Jersey Department of Environmental Protection to address all regulated discharges.

SPECIFICATIONS. The compilation of provisions and requirements for the performance of prescribed work contained in the Standard Specifications, as supplemented by the Supplemental Specifications and Special Provisions, and modified by Addenda which, before the receipt of bids, are transmitted to prospective Bidders.

1. *Standard Specifications.* The term "Standard Specifications" means the 2001 Standard Specifications for Road and Bridge Construction of the New Jersey Department of Transportation, which has been approved for general application and repetitive use.
2. *Supplemental Specifications.* Approved additions and revisions to the Standard Specifications.

3. *Special Provisions.* Revisions to the Standard and Supplemental Specifications applicable to an individual project.
4. *Electrical Materials Specifications.* Approved standards for electrical materials, equipment, and installations that are in addition to the above specifications.

SUBSTANTIAL COMPLETION. The term "Substantial Completion" means the point at which the performance of all Work on the Project has been completed except landscaping items (including the planting of trees, shrubs, vines, ground covers, and seedlings), final cleanup, and repair of unacceptable work, and provided the Engineer has solely determined that:

1. the Project is safe and convenient for use by the public, and
2. failure to complete the Work and repairs excepted above does not result in the deterioration of other completed Work; and provided further, that the value of landscaping work remaining to be performed, repairs, and cleanup is less than two percent of the Total Adjusted Contract Price.

THE FOLLOWING TERMS ARE DELETED:

ADDENDA

COMPUTER DISK

CLAIMS REVIEW BOARD

DISPUTE

101.04 Inquiries Regarding the Project.
THE FOLLOWING IS ADDED:

Inquiries regarding the various types of work of this Contract shall be directed to the following representatives of the Department having offices at P.O. Box 600, Trenton, New Jersey 08625, or such other individuals as may hereafter be designated:

1. Before Award of the Contract. All inquiries shall be directed to the Bureau of Quality Assurance at P.O. Box 600, Trenton, New Jersey 08625.

Telephone:
609-530-2377 (John Varrelmann)

Fax: 609-530-3853

All inquiries shall include the following:

a. Name of the company;
b. Telephone number, fax number, and contact person; and
c. Specifics of the inquiry, including anticipated impacts.

The Department will investigate the information provided in the inquiry and then respond through an addendum only if determined to be necessary.

2. After Award of the Contract. All inquiries shall be directed to the Resident Engineer through the following Regional Construction Office:

North
Mr. Carl F. Kneidinger, Regional Construction Engineer
200 Stierli Court
Mt. Arlington, NJ 07856-1322
Telephone: 973-770-5025

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

102.01 Prequalification of Prospective Bidders.

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Bids will be received only from Bidders who meet all of the following requirements:

1. Before the delivery of the bid, have been prequalified according to Regulations Covering the Classification of Prospective Bidders issued according to NJSA 27:7-35.1 *et seq.*
2. At the time of delivery of bid, have effective prequalification ratings of not less than the amounts of its bid.
3. At the time of delivery of bid, the Bidder has disclosed ownership as required by NJSA 52:25-24.2.
4. If the bidder is a corporation not incorporated in the State, it is authorized to do business in the State as required by NJSA 14A:15-2 *et seq.*
5. The bidder shall also be in compliance with P.L. 2005, c.51.
6. The bidder must have a valid business registration with the Division of Revenue in the New Jersey Department of Treasury as required by NJSA 52:32-44 (P.L. 2001, c.134).
7. For wholly State-funded contracts, at the time of bid, bidders must have a valid current registration with the New Jersey Department of Labor, Division of Wage and Hour Compliance, pursuant to the "Public Works Contractor Registration Act," NJSA 34:11-56.48 *et seq.* (P.L. 2003, c. 91.).

102.02 Disqualification of Prequalified Prospective Bidders.

THE CONTENT OF THIS SUBSECTION HAS BEEN DELETED AND IT IS INTENTIONALLY LEFT BLANK TO MAINTAIN SUBSEQUENT NUMBERING

102.03 Contents of the Proposal.

THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

102.03 Bidder Registration and Downloading of the Bid Documents; Contents of the Bid.

Electronic bidding information is available on Bid Express at www.bidx.com. Registration and a subscription fee are required to access the bid documents and plans. The bidder shall download the Expedite bidding software by navigating to State and clicking the "Utilities Tab". Before running the electronic bidding program, the Bidder shall read the on-line help documentation for the Expedite Bidding Software.

All bid documents with the exception of the Power of Attorney for the Proposal Bond shall be downloaded from the Bid Express web site. A bid shall consist of the downloaded and properly completed documents plus the Power of Attorney for the Proposal Bond which shall all be submitted to the Department on or before the time for the opening of bids.

The Proposal Form states the location and description of the Project, shows the estimate of the various quantities and kinds of work to be performed, includes a schedule of Pay Items for which bid prices are invited, and the date and time for the opening of bids. The Special Provisions state the number of days or date by which the Project must be completed.

The Bidder shall submit both a paper bid which is produced using the Expedite software as well as an electronic copy. No alteration to that software is permitted. The paper bid submitted to the Department will be reviewed and evaluated by the Department and serve as the basis for the award and subsequent Contract. In case of discrepancies between the paper bid and the electronic copy, the paper bid shall govern.

102.06 Examination of Contract Documents and Site of Project.

THE ENTIRE SUBSECTION IS CHANGED TO:

The Bidder shall examine carefully the site of the proposed Project, the Contract Documents, and other information before submitting a Proposal. The Contract Documents are not to be construed as an averred representation or warranty of the existing conditions. In the event the Bidder's examination reveals that the site conditions are inconsistent with the Contract Documents or there are discrepancies, errors, omissions or patent ambiguities within the Contract Documents, the Bidder shall immediately notify the Department as provided in Subsection 101.04. Bidders shall make such independent investigation and examination as necessary to satisfy the Bidder as to the conditions to be encountered in the performance of the Work and the type of equipment and operations required to perform the Work. The Bidder shall investigate, with respect to possible local material sources, the quality and quantity of material available and the type and extent of processing that may be required to produce material conforming to the requirements of the Contract Documents. The submission of a Proposal shall be considered prima facie evidence that the Bidder has made such independent investigation and examination, including the information provided below, and is fully aware of the

requirements of the Contract Documents, including all restrictions. Further, the Bidder warrants that the proposed contract prices in the Proposal include all costs to complete the Work.

The Bidders must provide written notice to the Regional Construction Engineer as listed in the Special Provisions Subsection 101.04, at least 24 hours in advance of any investigation at the site, and insure any staff at the site have two forms of identification and the site authorization form received with the purchase of the Contract Documents.

What is specified below is not a part of the Contract and is made available for information only. The Department makes no representation, warranty or guarantee, expressed or implied, by making available such information. It is also the Bidder's responsibility to access such information.

1. Investigation of Subsurface and Surface Conditions.

The records of the Department's subsurface investigation, including, but not limited to, boring logs and Geotechnical Engineering Design Reports, may be inspected at or ordered through the Department's plan file room, 1035 Parkway Avenue, P.O. Box 600, Trenton, New Jersey 08625. This investigation, while considered by the Department to be sufficient for design purposes, may not be a sufficient substitute for the Bidder's own investigation, interpretation, or judgement in preparing a Proposal for construction purposes. The Bidder shall not rely on any estimates and quantities included in these investigations. The conditions indicated by such investigations or records thereof, and as shown by the cross-sections in the Plans, may not be representative of those existing throughout such areas, or that materials other than, or in proportions different from those indicated, may be encountered.

The soil and rock descriptions shown on the boring logs are determined by a visual inspection of samples from the various explorations unless otherwise noted. These samples may be available for nondestructive examination. The observed water levels and other water conditions indicated on the boring logs are as recorded at the time of the exploration. These levels and other conditions may vary considerably, with time, according to the prevailing climate, rainfall, and other factors. If a generalized soil profile is described in the text it is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples.

The Bidder is charged with knowledge of the State's physical geography, and in performing its site investigation shall be fully aware of the following publications and such others as may be listed in the Special Provisions:

a. Bulletin 50, Geologic Series, "The Geology of New Jersey" by H. Kummel, out of print, available generally as library reference material.
b. Geologic Maps of New Jersey, available through NJDEP.
c. Engineering Soils Survey of New Jersey, available through the Bureau of Research, College of Engineering, Rutgers University, New Brunswick, New Jersey 08903.
d. Soil Surveys of Individual Counties prepared by the US Department of Agriculture, Soil Conservation Service, in cooperation with the New Jersey Agricultural Experiment Station and Cook College, Rutgers University, available through local Soil Conservation District Offices.

THE FOLLOWING IS ADDED:

Pavement core record will be provided in the Special Provision for the Contractor's information only. This investigation, while considered by the Department to be sufficient for design purposes, may not be a sufficient substitute for the Bidder's own investigation, interpretation, or judgment in preparing a Proposal. The conditions indicated by such investigation may not be representative of those existing throughout such areas, or those materials other than, or in proportions different from those indicated, may be encountered. The Bidder shall not solely rely on any information included in this investigation.

NEW JERSEY DEPARTMENT OF TRANSPORTATION
PAVEMENT CORE RECORD

PROJECT/ROUTE & SECTION: Route 93

DRILLER: Jersey Boring and Drilling

INSPECTOR: Muhammad Akbar, Earth Tech

COUNTY/TOWNSHIP: Borough of Leonia, Bergen County

DATE STARTED: 3/29/05 DATE COMPLETED: 4/7/06

CORE NUMBER	1	2	3	4
ROUTE	93	93	93	93
DIRECTION	NB	NB	NB	NB
MILE POST (Station)	18+21	34+38	51+42	63+70
CORE DIAMETER (Inches)	4	4	4	4
TOTAL CORE DEPTH (Inches)	1.06 feet	1.04 feet	0.75 feet	1.00 feet
CORE DRILLED TO	Bottom of base course	Bottom of base course	Bottom of base course	Bottom of base course
SURFACE TYPE (AC/PC)	AC	AC	AC	AC
AC THICKNESS (Inches)	6.5	6.5	5	5
PC THICKNESS (Inches)	6.5	6	4	7

* Lane 1 is the left lane in the direction of travel.

The pavement information shown herein was obtained for State design and estimate purposes. It is made available to the authorized users only that they may have access to the same information available to the State. It is presented in good faith, but is not intended as a substitute for investigations, interpretation or judgment of such authorized users.

2. **Utility Agreements.** In addition to what is provided under Subsection 105.09, the Utility agreements, modifications, and orders relating to the Project may be inspected at or ordered through the Department's plan file room, 1035 Parkway Avenue, P.O. Box 600, Trenton, New Jersey 08625. Existing information and proposed construction documents shall be obtained through the utility owners for their respective work.
3. **Existing Plans and As-builts.** As-built plans of Department owned facilities may be inspected at the Department's plan file room or copies ordered upon written request through the Engineering Documents Unit, New Jersey Department of Transportation, 1035 Parkway Avenue, P.O. Box 600, Trenton, New Jersey 08625. Contour maps may be available for some Projects and the Bidders may inspect such maps or obtain copies for their use upon written request to the Engineering Documents Unit. Plans of Municipal owned or County owned facilities shall be obtained through the Municipality or County. Any information obtained from the existing documents shall be verified by the Bidder in regards to its application for bidding and completing the Project. A list of existing structures within the Project will be provided on the Plans. The existing plans and as-builts used in the development of Contract Documents will be listed in the Special Provisions.
   Existing Plans and As-builts used are as follows:
   a. Plan and Profile for the Improvement of Grand Avenue, Borough of Leonia, Bergen County, N.J., Scales Hor: 1"=50'; Vert: 1'=5', Roscoe Parke McClave – County Engineer, Feb. 4th, 1926.
4. **Permits.** In addition to the permit information provided in the Contract Documents, the full permits relating to the Project may be inspected at or ordered through the Department's plan file room, 1035 Parkway Avenue, P.O. Box 600, Trenton, New Jersey 08625.

102.07 Preparation of Proposal.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The Bidder shall submit a Proposal Form, the Proposal Form shall include all addenda which shall also be downloaded from the Department Bid Express web site. The Bidder shall specify a price in figures for each Pay Item. For lump sum items, the price shall appear solely in the box provided for the lump sum item under the column designated as "Amounts." For unit price items the per unit price shall appear under the column designated "Unit Price" in the appropriate box, and the product of the respective unit price and the approximate quantity for that item shall appear under the column designated "Amounts." The Total Contract Price is the sum of all figures shown in the column designated "Amounts" and shall appear at the location provided therefor. When the Bidder intends to bid zero ($0.00) for a Pay Item, a "0" shall appear in the "Unit Price" and "Amounts" columns for unit price items or in the "Amounts" column for lump sum items.

When the Proposal Form contains alternate items, the Bidder shall only provide the unit price and amount for the lowest priced alternate item. When alternate items in the Proposal Form have a lump sum pay quantity, the Bidder shall only provide the amount for the lowest priced alternate item. The alternate item for which a price has been provided shall be constructed. When the Proposal Form contains alternate groups of items, the Bidder shall only provide the unit price and amount for each item within the lowest priced alternate group. The alternate group of items for which a price has been provided shall be constructed.

The only entries permitted in the Proposal Form produced using the Expedite software will be the unit or lump sum prices for items that must be bid. The Expedite software will perform all extensions of the unit or lump sum prices, calculate the total bid amounts, and print a completed Proposal Form.

The Proposal Form printed from the Expedite software shall be printed on 8 ½" x 11" white papers and shall include all revisions to the proposal included in issued addendum. Bids will be accepted only if submitted on the Proposal Form generated and printed from Expedite software.

The Bidder shall check its bid prior to submission using the Expedite software. The Bidder shall select "tools" and then select "check bid" and assure there are no errors prior to printing the electronic bid. After final printing, the Bidder may make changes to the bid by indicating the changes in ink and initialing prior to submitting the bid. In the event of a discrepancy between the electronic copy and the paper bid, the paper bid will govern.

The paper bid must be signed in ink by the Bidder. If the Bidder is an individual, the Bidder's name and post office address must be shown; by a partnership, the name and post office address of each partnership member must be shown; as a joint venture, the name and post office address of each member or officer of the firms represented by the joint venture must be shown; by a corporation, the name of the corporation and the business address of its corporate offices must be shown. For bids submitted by Joint Ventures the bidder shall select "tools" from the Expedite menu and mark the electronic bid as "Joint Bid."

102.09 Delivery of Proposals.

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Once the Bidder has completed the bid and made all desired changes, the paper bid with original signatures and an electronic copy on a CD-R shall be submitted to the Department. Deliver each bid in one envelope, with the addenda acknowledgements attached, containing the following:

(1) Signed paper bid
(2) Proposal Bond and Power of Attorney
(3) Updated Financial Statement form DC-74B
(4) Wholly State funded contracts, proof of the registration as specified in Subsection 102.01
(5) Wholly State funded contracts, the Certification and Disclosure form (P.L. 2005, c.51)
(6) Electronic copy in a protective case
(7) Other related documents as specified, including the Demolition/Asbestos attachments

The specified SBE or DBE/ESBE attachments may be included in the bid envelope. Clearly indicate its contents on the envelope, including the bidder's name and the DP number of the electronic bid. The bid shall be mailed or hand carried to the Department at the address and in care of the official in whose office the bids are to be received. Bids must be received before or at the time and at the place specified in the Advertisement. Bids will not be accepted after the receipt of bids has been declared closed by the Presiding Officer.

When the Bidder submits bids for two or more Projects, a single Updated Financial Statement, submitted in a separate envelope, is acceptable instead of a separate statement for each Project.

102.10 Proposal Bond.
THE FIRST PARAGRAPH IS CHANGED TO:

The Proposal Bond guarantees execution of the Contract by the bidder receiving the award.

The bid, when submitted, shall be accompanied by a Proposal Bond satisfactory to the Department, on the form furnished by the Department, for a sum of 50 percent of the Total Contract Price. Proposal bonds which do not comply in all respects with the provisions of N.J.A.C. 16:44-5.1 (d), including no reinsurance, will not be accepted.

102.13 Acknowledgment of Revisions.
THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

102.13 Revisions During Bidding.

Any written, graphic, or electronic information to clarify, correct, or change the Contract Documents or bidding notices will be issued only as Addenda (or "Addendum" can be used interchangeably) before the opening of bids that clarify, correct, or change the Contract Documents. The Department will not send addenda to individual prospective bidders, but will only post addenda on the Department Bid Express web site. No addenda shall be posted less than 24 hours before the time set for the receipt of bids, with the exception of addenda postponing the bid opening date and time.

When Addenda are posted on the Department Bid Express web site, acknowledgment thereof must be made by the Bidder. Attach each acknowledgement to the Bid envelope. If all acknowledgments have not been attached, the bid envelope will be returned to the Bidder unopened. It is the obligation of the bidder to check the Department Bid Express web site for addenda.

102.15 Irregular Proposals.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Proposals will be considered irregular and will be rejected by the Department if they are determined to contain a material defect.

102.16 Disqualification of Bidders.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The Department will disqualify a bidder and reject a bid submitted by that bidder if the bidder is determined by the Department to lack responsibility. Factors demonstrating a lack of responsibility shall include but not be limited to:

1. Evidence of collusion among bidders.
2. Uncompleted work, which in the opinion of the Department, might hinder or prevent completion of additional work if awarded.

3. Failure to satisfy the pre-award requirements of the Disadvantaged Business Enterprise or Emerging Small Business Enterprise (DBE or ESBE) as specified in the Special Provisions for federally funded contracts.
4. Failure to satisfy the pre-award requirements of the Small Business Enterprise (SBE) as specified in the Special Provisions for wholly State funded contracts.
5. The bid is materially unbalanced.
6. Lack of competency or lack of adequate machinery, plant, or other equipment.
7. Unsatisfactory performance on previous or current contracts.
8. Questionable moral integrity as determined by the Attorney General of New Jersey or the Department.
9. Any other outward actions or lack of action that demonstrates the Bidder is not responsible.
10. Disqualification, suspension, or debarment of an individual, firm, partnership, corporation, or any combination as required by NJSA 16:44-8.1

THE FOLLOWING SUBSECTION IS ADDED:

102.17 Rejection of All Bids.

The Department may reject all bids when it is advisable to do so in the interest of the State or public.

SECTION 103 - AWARD AND EXECUTION OF CONTRACT

103.05 Performance Bond and Payment Bond.

THE FOLLOWING IS ADDED TO THE FOURTH PARAGRAPH:

Reinsurance is prohibited pursuant to NJAC 16:44-6.1(b)6.

103.06 Execution and Approval of Contract.

THE HEADING AND THE ENTIRE SUBSECTION IS CHANGED TO:

103.06 Execution of the Contract.

The successful Bidder shall properly and duly execute a Contract in accord with Contract Documents and return same, together with the Performance Bond and Payment Bond, within ten State Business Days of the date of Award or Conditional Award. The successful bidder shall also provide the Department, within the same ten State Business Day period, proof of a valid business registration with the Division of Revenue in the New Jersey Department of Treasury. The Contract will not be entered into by the Department unless the Bidder first provides proof of a valid business registration in compliance with N.J.S.A. 52:32-44 (P.L. 2001, c134). For FHWA funded projects, the successful bidder shall also provide proof of valid, current registration with the New Jersey Department of Labor, Division of Wage and Hour Compliance as required by "Public Works Contractor Registration Act," N.J.S.A. 34:11-56.48 et seq. (P.L. 2003, c. 91). If said Contract is not executed by the Commissioner within 45 State Business Days following receipt from the Bidder of the executed Contract and Performance Bond and Payment Bond, the Bidder may within its discretion withdraw its bid without penalty; where the Bidder chooses not to withdraw prior to the Commisioner executing said Contract, the Bidder shall be deemed to have waived any claim for Additional Compensation or for an extension of time. The Contract shall not become effective until it has been fully executed by all parties.

THE FOLLOWING SUBSECTION IS ADDED:

103.08 Contract Documents.

After Award, the successful bidder may request the number of sets of Plans specified below, without charge. One copy of Special Provisions and Addenda is furnished, without charge, with each set of the Plans. Additional sets or additional copies are available to subscribers through www.bidx.com as specified in Subsection 102.03.

Table of Plans Furnished Without Charge

Amount of Contract		Sets of Plans
For More Than	To and Including	
$ 0	$ 500,000	1
500,000	1,000,000	2
1,000,000	5,000,000	3
5,000,000	10,000,000	4
10,000,000	--	5

SECTION 104 - SCOPE OF WORK

104.01 Intent.
THE FIRST PARAGRAPH IS CHANGED TO:

The intent of the Contract Documents is to describe a functionally complete and aesthetically acceptable Project to be constructed and completed by the Contractor in every detail according to the Contract Documents. Any work that may be reasonably inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. The Contractor is responsible to provide such elements to complete the Work under the pay items of the Contract for no Additional Compensation as provided under Subsection 109.02. However, as specified in the respective Subsections, adjustments may be allowed when the Department determines there is a discrepancy, error, omission, or latent ambiguity. It is understood that only the best construction practice is to prevail and only materials and workmanship of the first quality are to be used.

104.05 Increased or Decreased Quantities.
THE FOLLOWING IS ADDED:

Those Pay Items listed below shall be considered as major Pay Items even though their Contract value may not be more than ten percent of the Total Contract Price:

CONCRETE PAVEMENT REPAIR PRIOR TO OVERLAY
SAWCUTTING
CONCRETE SIDEWALK, 4" THICK

104.11 Value Engineering
4. Conditions.
THE LAST TWO PARAGRAPHS ARE CHANGED TO:

The proposal shall not change the Contract's original design criteria, merely eliminate work, be based on an unknown factor, or delay the Project.

All proposals for changes to bridges and structures shall conform to the current AASHTO Standard Specifications for Highway Bridges as modified by the NJDOT Design Manual for Bridges and Structures.

SECTION 105 - CONTROL OF WORK

105.03 Plans and Specifications.
THE ENTIRE TEXT IS CHANGED TO:

The Contract Documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. All components are complementary and describe and provide for the general completion of the Project. The Contractor shall keep one set of Plans, Special Provisions, Addenda, Standard Specifications, Supplemental Specifications, and Standard Details available on the Project site at all times.

In case of discrepancy, calculated dimensions will govern over scaled dimensions; Plans will govern over Specifications; Contract Documents will govern over Working Drawings, Right-of-Way Plans will govern over Plans when setting monuments; Special Provisions will govern over Supplemental Specifications; and Supplemental Specifications will govern over Standard Specifications.

The Contractor shall not take advantage of any apparent discrepancy, error, omission, or patent ambiguity in the Contract Documents. In the event the Contractor discovers any discrepancy, error, omission; or patent ambiguity in the

Contract Documents, or if there is any doubt or question as to the intent or meaning of the Contract Documents, the Contractor shall immediately notify the Resident Engineer in writing with sufficient detail. The Department will promptly make, in writing, such corrections and interpretations as deemed necessary. The Contractor shall not be relieved of the obligation of completing an item of Work because of any discrepancy, error, omission, or patent ambiguity, and shall complete the Work as directed with adjustments as specified in Section 104. The Contractor shall not commence with any changes to the Work as provided under the Contract Documents without written authorization from the Department.

105.04 Working Drawings.
THE SECOND SENTENCE OF THE THIRD PARAGRAPH IS CHANGED TO:

Those provisions shall not apply to the review and approval of the design for proprietary walls, noise barriers, temporary sheeting, sheeting left in place, temporary structures, cofferdams, erection plans, traffic control/staging plans and precast concrete culverts or any other items where conceptual plans were included in the Contract Documents and the Contractor is required to complete the final design plans.

THE FOLLOWING IS ADDED TO THE ELEVENTH PARAGRAPH:

The design unit(s) shall be as designated for each Contract by letter from the Department.

105.07 Coordination of Contract Documents.
THE SUBSECTION HEADING AND TEXT ARE CHANGED TO:

105.07 Purchase of Contract Documents.
THE CONTENT OF THIS SUBSECTION HAS BEEN DELETED AND IT IS INTENTIONALLY LEFT BLANK TO MAINTAIN SUBSEQUENT NUMBERING

105.09 Cooperation with Utilities.
THE ENTIRE TEXT IS CHANGED TO:

A. General. It is understood and agreed that the Contractor has considered in its Proposal all of the permanent and temporary utility facilities in their present, new, or relocated positions to the extent required by the Contract Documents and as revealed by its own investigations; is aware that utility service demands, adverse field conditions and emergencies may affect the Utility's ability to comply with the proposed schedules for utility work; is cognizant of the limited ability of the Department to control the actions of the Utility(s), and has made allowances in its Proposal that it is not entitled to any Additional Compensation by reasons of delays, inconvenience or damage sustained by the Contractor due to any interference from utility facilities or the operation of moving or installing them. Similarly, the Contractor is deemed to understand that only limited extensions of time may be granted as specified in Subsection 108.11.

The Contractor shall notify, in writing, the Utility(s) involved of the nature and scope of the Project, and of its operations that may affect their facilities or property. The notice shall include an inquiry for all information required to determine the location of the existing utility facilities and the Contractor shall also provide the portion of the approved Preliminary Schedule relative to that respective Utility. Two copies of such notices and the Utility's responses shall be sent to the Resident Engineer prior to the start of Construction Operations. The Contractor shall also attend a Utility preconstruction conference prior to the start of Construction Operations.

The Contractor shall provide each Utility the portion of the approved Baseline CPM Schedule related to the respective Utility and any approved updates or revisions that affect that Utility.

Information on the Utility(s), including the work to be performed by the Utility(s) on the Project, will be provided in the Special Provisions.

The corporations, companies, agencies, or municipalities owning or controlling the utilities, and the name, title, address, and telephone number of their local representative are as listed below:

PSE&G (Electric)
Mr. Bob Ozust

Engineering Technician
Palisades Division
325 County Avenue
Secaucus, New Jersey 07094
Telephone: 201-330-6490
Fax: 204-392-1321

For Pipe-Type Transmission Cable
4000 Hadley Road
South Plainfield, New Jersey 07080
Office Contact:
Mr. Raymond Markunas
Manager Electric Transmission and Maintenance Underground
Telephone: 908-412-7629
Field Contact:
Mr. Robert Mas
Supervisor Electric Transmission and Maintenance Underground
Telephone: 908-412-7672
Cell Phone: 908-227-0050

PSE&G (Gas)
Mr. Jorge Silva
Project Sponsor
Gas Transmission and Distribution
80 Park Plaza
Box 570
Mail Code: 13A
Newark, New Jersey 07102-4194
Telephone: 973-430-7333
Fax: 973-643-1658

Verizon – New Jersey, Inc.
Ms. Sandra Cruger
Hudson/Bergen DOT
1500 Teaneck Road, Floor 2
Teaneck, New Jersey 07666
Telephone: 201-541-9969
Fax: 201-541-7343

Time Warner Cable
Mr. Michael Malik
Construction Manager
200 Roosevelt Place
Palisades Park, New Jersey 07650
Telephone: 201-592-7600 ext. 339
Fax: 201-592-7736

United Water New Jersey
Mr. Owen Blake
Staff Engineer
700 Kinderkamack Road
Oradell, New Jersey 07649
Telephone: 201-634-4239
Fax: 201-538-0361

Bergen County Utility Authority

Box 9
Foot of Mehrhof Road
Little Ferry, New Jersey 07642
Office:
Mr. Serban Chelariu
Telephone: 201-807-5866
Fax: 201-807-0507
Field:
Mr. Steve Auriemma
Telephone – cell: 201-538-4260
Fax: 201-807-5870
Dispatcher:
Telephone: 201-807-5874

Borough of Leonia Sewer

Railroad
Initial contact and all correspondence:
Mr. Brian V. Harrison
Manager – Construction Services
DMJM Harris
260 South Broad Street, Suite 1500
Philadelphia, Pennsylvania 19102
Telephone: 215-965-2220
Subsequent contact:
CSXT construction contact provided by Mr. Harrison at initial contact.

Bidders are advised to verify the above information as its accuracy and completeness is not guaranteed by the Department.

UTILITY WORK AND TIME FRAMES

General Notes:

1. The state's Resident Engineer will provide the utility with notices called for in the schedules.
2. The Contractor will provide the utility with survey control. The Contractor and the utility shall jointly verify the location of the facilities prior to installation.
3. Utility schedules are estimated time frames for individual utility owners only and do not include work performed by other utility owners sharing joint facilities.
4. Utility schedules are based on the project traffic control and staging plan for each utility mobilization. Utility service demands, field and weather conditions may alter these schedules. State (Contractor) changes to the traffic control and staging plan require reestablishing utility schedules.
5. Where joint facilities are existing or proposed, the utility shall coordinate its work with the joint owners.
6. Existing facilities can be removed only after the relocated facilities have been installed and are in operation.
7. Distances, stations, offsets, lengths or units on the utility plan are approximate (plus or minus).

UTILITY WORK TO BE PERFORMED

Public Service Electric & Gas Company - Electric

Existing Facilities
Aerial Primary and Secondary; Underground Primary, Secondary and Transmission

Work Performed by PSE&G:

3. Route 93, Sta. 47+96 Lt. (Manhole No. 42) to Sta. 59+16 Lt. (Manhole No. 49). Reset 4 manholes (Nos. 42, 38, 37, 49) to proposed grade.

Schedule:
Utility requires 3 weeks notice and 2 weeks to perform the work.

5. Route 93, Sta. 45+00 Lt. (Pole No. 60374LO) to Sta. 46+42 Lt. (Manhole No. 45), 1-5" conduit and 4-4" conduits. Install conduit and riser with cable (all to match existing) between pole and manhole to accommodate proposed drainage.
   Schedule:
   Utility requires 3 weeks notice and 2 weeks to perform the work.
6. Route 93, Sta. 45+00 Lt. (Pole No. 60374LO) to Sta. 46+42 Lt. (Manhole No. 45), 1-5" conduit and 4-4" conduits. Abandon conduit in place.

Work Performed by Contractor:

1. Maple St., Sta. 2000+15 to Sta. 2000+50, 2-230 KV pipe-type cables. Perform test pit by hand digging to expose pipes. Provide northing, easting and elevation of top of pipes. Provide survey information to utility and state. Replace low resistivity backfill with like material when backfilling test pit. Compact backfill according to utility procedures. Perform work in presence of utility.
   Schedule:
   Work to be performed before any other construction activities. Utility requires 1 week notice to provide inspector.
2. Maple St., Sta. 2000+15 to Sta. 2000+70, 2-230 KV pipe-type cables. Contractor to perform all subsurface work related to pipe jacking of drainage pipe, including jacking pit excavation and jacking operations, in presence of utility.
   Schedule:
   Work to be performed in the course of construction. Utility requires 1 week notice to provide inspector.
4. Route 93, Sta. 12+00 to Sta. 69+50 and all side streets within project limits. Hold poles as necessary during construction.

Public Service Electric & Gas Company - Gas

Existing Facilities
8" Cast Iron Gas Main and 4" & 6" Plastic and Cast Iron Gas Mains

Gas Notes:

1. Live gas work on mains to be performed by utility. Utility requires 8 weeks notice. All other work to be performed by the State's Contractor in the course of construction.
2. Utility to provide valve box inserts, pipe materials and appurtenances. State's Contractor to provide all other materials. Utility requires 8 weeks notice to provide materials.
3. Crossing within one foot circumferentially of cast iron pipe to be considered conflict.
4. Encroachment within influence zone of cast iron gas pipe or construction to be considered conflict.
5. State's Contractor to take precautions to protect plastic mains located within two feet laterally of excavations.
6. Prior to construction, State's Contractor to perform test pits. Test pits to be performed in the presence of the utility. Utility requires four weeks notice to furnish inspector.
7. All work, including test pits, to be performed in the presence of the utility. Utility requires 4 weeks notice to provide inspector.

Work Performed by Contractor:

1. Throughout project limits: perform test pits at a minimum spacing of 250 feet along the length of all mains and at changes in alignment to verify the location of mains. Test pits to be performed prior to construction.
2. Throughout project limits: reset valve boxes to accommodate change in grade (approx. 3).
3. Throughout project limits at service laterals, work to be performed on an if and where directed basis unless shown on the plans: perform test pit. Relocate service lateral if pipe is in conflict with proposed drainage or if service lateral is safety concern. Pipe to be same size, plastic gas pipe.
4. Throughout project limits: remove abandoned service laterals/abandon in place.
5. Route 93, Sta. 17+7 Rt. (Moore Ave.). Construct approx. 50 ft. 4" plastic pipe.
6. Route 93, Sta. 17+7 Rt. (Moore Ave.). Remove abandoned facilities/abandon in place.

7. Route 93, Sta. 19+83 Lt. (Ames Ave.) to Ames Ave. Sta. 101+40 Rt. Construct approx. 150 ft. 6" plastic pipe, 20 ft. 8" plastic pipe to accommodate proposed drainage. (Avoid vertical and lateral conflicts on Ames Ave., avoid vertical conflicts on route 93.)
8. Route 93, Sta. 19 + 83 Lt. (Ames Ave.) to Ames Ave. Sta. 101+40 Rt. Remove abandoned facilities/abandon in place.
9. Route 93, Sta. 19 + 96 Lt. (Ames Ave.). Construct approx. 20 ft. 4" plastic pipe.
10. Route 93, Sta. 19 + 96 Lt. (Ames Ave.). Remove abandoned facilities/abandon in place.
11. Route 93, Sta. 22+47 Lt. (Sylvan Ave.) to Sylvan Ave. Sta. 200+50. Construct approx. 50 ft. 6" plastic pipe, 40 ft. 8" plastic pipe to accommodate proposed drainage.
12. Route 93, Sta. 22+47 Lt. (Sylvan Ave.) to Sylvan Ave. Sta. 200+50. Remove abandoned facilities/abandon in place.
13. Route 93, Sta. 25 (Highwood Ave.). Construct approx. 55 feet 4" plastic pipe and 6 feet 8" plastic pipe.
14. Route 93, Sta. 25 (Highwood Ave.). Remove abandoned facilities/abandon in place.
15. Route 93, Sta. 26+60 to Sta. 28+50 (Park Ave.). Construct approx. 190 ft. 8" plastic pipe.
16. Route 93, Sta. 26+60 to Sta. 28+50 (Park Ave.). Remove abandoned facilities/abandon in place.
17. Park Ave., Sta. 300+25 Rt. to Sta. 300+50.Rt. Construct approx. 25 ft. of 4" plastic pipe.
18. Park Ave., Sta. 300+25 Rt. to Sta. 300+50 Rt. Remove abandoned facilities/abandon in place.
19. Route 93, Sta. 32+50 Lt. (Christie St.) to Sta. 36+25 (Maple St.). Construct approx. 390 ft. 8" plastic pipe to accommodate proposed drainage crossings. Construct approx. 20 ft. of 6" plastic lateral to tie in, left at Christie St. Construct approx. 30 ft. of 4" plastic lateral to tie in, left and approx. 20 ft. of 4" plastic pipe to tie in, right at Maple St.
20. Route 93, Sta. 32+50 Lt. (Christie St.) to Sta. 36+25 (Maple St.). Remove abandoned facilities/abandon in place.
21. Prospect St., Sta. 500 Lt. to Sta. 501+15 Lt. Construct approx. 125 ft. of 4" plastic pipe.
22. Prospect St., Sta. 500 Lt. to Sta. 501+15. Remove abandoned facilities/abandon in place.
23. Route 93, Sta. 42+55 (Palisade Ave.). Construct approx. 55 ft. of 4" plastic pipe.
24. Route 93, Sta. 42+55 (Palisade Ave.). Remove abandoned facilities/abandon in place.
25. Route 93, Sta. 47+37 to Sta. 47+87 Lt. Construct approx. 50 ft. 8" plastic pipe to accommodate proposed drainage crossing.
26. Route 93, Sta. 47+37 to Sta. 47+87 Lt. Remove abandoned facilities/abandon in place.
27. Route 93, Sta. 50+75 to Sta. 51+25. Construct approx. 50 ft. 8" plastic pipe to accommodate proposed drainage crossing.
28. Route 93, Sta. 50+75 to Sta. 51+25. Remove abandoned facilities/abandon in place.
29. Route 93, Sta. 55+20 to Sta. 57+10 Lt. Construct approx. 190 ft. 8" plastic pipe.
30. Route 93, Sta. 55+20 to Sta. 57+10 Lt. Remove abandoned facilities/abandon in place.
31. Route 93, Sta. 59+10 Lt. (Hillside Ave.) to Sta. 69+36 Lt. (Christie Heights). Construct approx. 1010 ft. 8" plastic pipe to avoid vertical conflict at crossing and lateral conflict.
32. Route 93, Sta. 59+10 Lt. (Hillside Ave.) to Sta. 69+36 Lt. (Christie Heights). Remove abandoned facilities/abandon in place.
33. Route 93, Sta. 59+10 Lt. to Hillside Ave. Sta. 600+40 Rt. Construct approx. 45 ft. 4" plastic pipe.
34. Route 93, Sta. 59+10 Lt. to Hillside Ave. Sta. 600+40 Rt. Remove abandoned facilities/abandon in place.
35. Route 93, Sta. 62+17 (Cottage Pl.). Construct approx. 45 ft. 4" plastic pipe to accommodate proposed drainage crossings and drainage structure.
36. Route 93, Sta. 62+17 (Cottage Pl.). Remove abandoned facilities/abandon in place.
37. Route 93, Sta. 65+5 (Harrison St.). Construct approx. 70 ft. 4" plastic stub to accommodate proposed drainage crossing and drainage structures.
38. Route 93, Sta. 65+5 (Harrison St.). Remove abandoned facilities/abandon in place.
39. Route 93, Sta. 68+62 Lt. Construct approx. 20 ft. 4" plastic pipe to tie into relocated 8" pipe.
40. Route 93, Sta. 68+62 Lt. Remove abandoned facilities/abandon in place.
41. Route 93, Sta. 68+89 (Christie Heights). Construct approx. 25 ft. 4" plastic pipe to tie into relocated 8" pipe.
42. Route 93, Sta. 68+89 (Christie Heights). Remove abandoned facilities/abandon in place.

Verizon – New Jersey, Inc. - Telephone

Existing Facilities
Aerial Cable and Fiber Optic; Underground Cable

Work Performed by Verizon:

1. Route 93, Sta. 45+00 Lt. (Pole No. 60374LO) to Sta. 45 + 57 Lt. (Manhole No. 34). Install new conduit, riser and wire (1-600 pair, 26 gauge) to match existing between pole and manhole to accommodate proposed drainage. Reset manhole to proposed grade. Utility requires 8 weeks notice and 4 weeks to perform the work.
2. Route 93, Sta. 45 + 00 Lt. (Pole No. 60374LO) to Sta. 45 + 57 Lt. (Manhole No. 34). Abandon conduit in place.

Work Performed by Contractor:

2. Route 93, Sta. 45+00 Lt. (Pole No. 60374LO) to Sta. 45+57 Lt. (Manhole No. 34). Remove abandoned facilities as necessary for construction.

United Water New Jersey - Water

Existing Facilities
24" Water Main and Lateral Mains of Various Sizes

Water Notes:

1. Encroachment of new drainage pipe within 6 inches circumferentially of water pipe to be considered conflict.
2. Encroachment of new drainage within 2 feet laterally of water pipe to be considered conflict.
3. Utility to perform chlorinization of all mains. Utility require 3 weeks notice and 2 weeks to perform the chlorinization.
4. State's Contractor to perform test pit to verify each conflict before relocating.
5. Utility to provide valves and valve boxes.
6. State's Contractor to provide all other materials.
7. Utility to operate valves. Utility requires 1 week notice.
8. All work to be performed in the presence of the utility.

Work Performed by United Water:

1. Reset valve boxes throughout project limits to accommodate changes in grade (approx. 35). Reset curb stops throughout project limits to accommodate changes in grade (approx. 25). Reset hydrants throughout project limits to accommodate changes in grade (approx. 10). Perform work on an if and where directed basis. Utility requires 3 weeks notice and 1 day to perform the work for each relocation.
2. Throughout project limits, on an if and where directed basis, perform test pits for service laterals. Relocate service lateral if test pit confirms pipe is in conflict with proposed drainage (approx. 65). Water pipe to be same size as existing. Utility requires 3 weeks notice and 1 day to perform the work for each relocation.
3. Throughout project limits, abandon service laterals in place.
31. Route 93, Sta. 47+91 Rt. Relocate curb stop and service lateral. Utility requires 2 weeks notice and 1 week to perform work.
34. Route 93, Sta. 47+35 Lt. to Sta. 47+85 Lt., 24" main. Backfeed services from hydrants during water main relocation.
36. Route 93, Sta. 50+75 Lt. to Sta. 51+25 Lt., 24" main. Backfeed services from hydrants during water main relocation.

Work Performed by State (Contractor):

4. Route 93, Sta. 13+4 (Oakdene Ave.), 6" main. Cut in valve if needed. Relocate approx. 50 ft. of 6" water pipe to accommodate proposed drainage. Utility requires 3 weeks notice to provide inspector.
5. Route 93, Sta. 13+4 (Oakdene Ave.). Remove abandoned facilities/abandon in place.
6. Route 93, Sta. 14+43. Relocate approx. 30 ft. of 2" service lateral if water pipe is in conflict with proposed drainage. Utility requires 3 weeks notice to provide inspector.
7. Route 93, Sta. 14+43. Remove abandoned facilities/abandon in place.

8. Route 93, Sta. 17+30 (Moore Ave.), 6" main. Cut in valve. Relocate approx. 65 ft. of 6" water pipe to accommodate proposed drainage. Utility requires 3 weeks notice to provide inspector.
9. Route 93, Sta. 17+30 (Moore Ave.). Remove abandoned facilities/abandon in place.
10. Route 93, Sta. 20+1 (Ames Ave.), 6" main. Cut in valve if needed. Relocate approx. 50 ft. of 6" water pipe to accommodate proposed drainage. Utility requires 3 weeks notice to provide inspector.
11. Route 93, Sta. 20+1 (Ames Ave.). Remove abandoned facilities/abandon in place.
12. Route 93, Sta. 22+65 (Sylvan Ave.), 6" main. Cut in valve if needed. Relocate approx. 40 ft. of 6" water pipe to accommodate proposed drainage. Utility requires 3 weeks notice to provide inspector.
13. Route 93, Sta. 22+65 (Sylvan Ave.). Remove abandoned facilities/abandon in place.
14. Route 93, Sta. 25+20 (Highwood Ave.), 6" main. Cut in valve if needed. Relocate approx. 45 ft. of 6" water pipe to accommodate proposed drainage. Utility requires 3 weeks notice to provide inspector.
15. Route 93, Sta. 25+20 (Highwood Ave.). Remove abandoned facilities/abandon in place.
16. Route 93, Sta. 28+85 Lt. to Park Ave., Sta. 301+65 Lt., 6" main. Cut in valve if needed. Construct approx. 165 ft. of 6" water pipe to avoid lateral conflict at proposed drainage. Relocate to accommodate proposed drainage crossings. Utility requires 3 weeks notice to provide inspector.
17. Route 93, Sta. 28+85 Lt. to park Ave., Sta. 301+65 Lt. Remove abandoned facilities/abandon in place.
18. Route 93, Sta. 34+93 Rt. Excavate around valve with care. Protect and support as necessary. Utility requires 2 weeks notice to provide inspector.
19. Route 93, Sta. 35+40 and Sta. 35+96 (Christie St. & Maple St.), 24" main. Support water main during construction. Submit working drawings of support details and design for utility approval. No work shall be performed until utility approves details and design. Utility requires 2 weeks notice to provide inspector.
20 Route 93, Sta. 35+78 30 ft. Rt. to Maple St., Sta. 409, 6" main. Cut in valve if needed. Construct approx. 135 ft. of 6" water pipe to accommodate proposed drainage system. Utility requires 3 weeks notice to provide inspector.
21. Route 93, Sta. 35+78 Lt. to Maple St., Sta. 409. Remove abandoned facilities/abandon in place.
22. Maple St., Sta. 403+5 Rt. to Sta. 403+16 Rt, 8" main. Cut in valve if needed. Construct approx. 35 ft. of 8" water pipe. Utility requires 3 weeks notice to provide inspector.
23. Maple St., Sta. 403+5 Rt. to Sta. 403+16 Lt. Remove abandoned facilities/abandon in place.
24. Maple St., Sta. 403+8 (Station Parkway), 8" main. Cut in valve if needed. Construct approx. 60 ft. of 8" water pipe. Utility requires 3 weeks notice to provide inspector.
25. Maple St., Sta. 403+8 (Station Parkway). Remove abandoned facilities/abandon in place.
26. The work associated with this work item has been eliminated.
27. Route 93, Sta. 42+65 (Palisade Ave.), 6" main. Perform test pit. Cut in valve if needed. Construct approx. 45 ft. of 6" water pipe if existing water pipe is a vertical conflict with proposed drainage crossing. Utility requires 3 weeks notice to provide inspector.
28. Route 93, Sta. 42+65 (Palisade Ave.). Remove abandoned facilities/abandon in place.
29. Fort Lee Rd., Sta. 909+11, 6" main. Perform test pit. Cut in valve if needed. Construct approx. 30 ft. of 6" water pipe if existing water pipe is a vertical conflict with proposed drainage crossing. Utility requires 3 weeks notice to provide inspector.
30. Fort Lee Rd., Sta. 909+11. Remove abandoned facilities/abandon in place.
32. Route 93, Sta. 46+50 Lt., 24" main. Cut in valve. Perform work after performing test pits at nearby drainage crossings, if test pits confirm conflicts. Utility requires 32 weeks notice to provide valve and 2 weeks notice to provide inspector.
33. Route 93, Sta. 52+50 Lt., 24" main. Cut in valve. Perform work after performing test pits at nearby drainage crossings, if test pits confirm conflicts. Utility requires 32 weeks notice to provide valve and 2 weeks notice to provide inspector.
34. Route 93, Sta. 47+35 Lt. to Sta. 47+85 Lt., 24" main. Perform test pit. Construct approx. 50 ft. of 24" water pipe if existing water pipe is a vertical conflict with proposed drainage crossing. Perform work after valves are cut in and services are backfed. Utility requires 2 weeks notice to provide inspector.
35. Route 93, Sta. 47+35 Lt. to Sta. 47+85 Lt. Remove abandoned facilities/abandon in place.
36. Route 93, Sta. 50+75 Lt. to Sta. 51+25 Lt., 24" main. Perform test pit. Construct approx. 50 ft. of 24" water pipe if existing water pipe is a vertical conflict with proposed drainage crossing. Perform work after valves are cut in and services are backfed. Utility requires 2 weeks notice to provide inspector.
37. Route 93, Sta. 50+75 Lt. to Sta. 51+25 Lt. Remove abandoned facilities/abandon in place.

38. Route 93, Sta. 62+33 (Cottage Pl.), 6" main. Perform test pits at each proposed drainage crossing. Cut in valve if needed. Construct approx. 55 ft. of 6" water pipe if existing water pipe is a vertical conflict with proposed drainage crossings. Utility requires 2 weeks notice to provide inspector.
39. Route 93, Sta. 62+33 (Cottage Pl.). Remove abandoned facilities/abandon in place.
40. Route 93, Sta. 66 Lt., 24" main. Cut in valve. Utility requires 32 weeks notice to provide valve and 2 weeks notice to provide inspector.
41. Route 93, Sta. 65+15 (Harrison St.), 6" and 24" mains. Construct approx. 35 ft. of 6" water pipe to accommodate proposed drainage crossing. Construct approx. 40 ft. of 24" water pipe because of proximity of relocation to 24" main. Perform work after valve is cut in. Utility requires 2 weeks notice to provide inspector.
42. Route 93, Sta. 65+15 (Harrison St.), 6" and 24" mains. Remove abandoned facilities/abandon in place.
43. Route 93, Sta. 69+4 (Christie Heights St.), 24" main. Support water main during construction. Submit working drawings of support details and design for utility approval. No work shall be performed until utility approves details and design. Utility requires 2 weeks notice to provide inspector.

B. Existing Facilities. The Contractor shall not proceed with any excavation operations until it has determined the exact location of the existing utility facilities within the Project from examination of the Contract Documents and information provided in Subsection 102.06, through inquiries to the respective Utility(s), and through its own subsurface site investigations, including test pits. Test Pits shall be as specified in Subsection 207.04. The Contractor shall notify the Resident Engineer as specified in Subsection 105.03 if their examinations determine any conflicts to completing the Work.

The Contractor shall notify the Resident Engineer at least 10 State Business Days in advance of the excavation of any test pits, or other subsurface investigations. Bidders shall notify the Department in advance as specified in Subsection 102.06.

Electrical installations, including Intelligent Transportation Systems (ITS) facilities as specified in Section 706, of the Department constructed either before or as part of the Contract shall be considered a Utility, and all provisions of this Subsection and Division 700 shall be applicable.

Examination of Department documents available on existing electrical installations shall be as specified in Subsection 102.06. The Contractor may request markout for the fiber optic network of the Department ITS facilities. Markout will be provided within ten Working Days after the completed, written Traffic Operations Markout Form is received by the Traffic Operations location specified in the Special Provisions in this Subsection. The Contractor shall copy the Resident Engineer on the written request and shall maintain the markout until all operations in the vicinity of the ITS facilities are completed.

C. Regulations. The Contractor shall also comply with all other State and Federal rules, and regulations applicable to work on or in the proximity of utilities. Specific attention is made to:

1. The State's Underground Facility Protection Act. The Contractor shall notify the State's One Call System (1-800-272-1000) and identify itself as the State's Contractor and specify the route and contract number of the Project before performing Work on the Project.
2. High voltage line requirements according to NJSA 34:6-47.1 to 47.9, 29 CFR 1926.550, and the Utility Accommodation Policy, NJSA 16:25. The Contractor shall obtain written approval from the Department of Labor, Office of Safety Compliance, and the respective Utility(s) if required, for any operations that do not provide the minimum clearances under these regulations. The Contractor shall be responsible for any proposed power outage or de-energization associated with their operations. A copy of the approvals shall be submitted to the Resident Engineer at least 5 State Business Days in advance of starting those operations.

D. Notices. The Contractor shall make a written request to the Resident Engineer at least 10 State Business Days in advance of the notice requirements provided in the Special Provisions for the Department to notify Utility(s) to proceed with the Utility(s) utility work. The Contractor shall be cognizant that where joint use poles or duct banks are used, the time frames for work performed by each user are cumulative. The Contractor shall guarantee the site availability for utility operations. The Department will notify the Utility(s) to proceed if in the Department's opinion the site will be available for a particular item of utility work. The Contractor shall permit the Utility(s) or their agents access to their facilities at all times and shall cooperate with them in performing their work.

The Contractor shall cooperate with the Utility(s) concerned and shall notify them, through the Resident Engineer, not less than 10 State Business Days in advance of the time it proposes to construct any utility item or perform any work that may endanger or affect their facilities. The Contractor shall have the contractual obligation of coordinating its activities with those of the Utility(s). The Utility(s) shall be given the opportunity to inspect the actual material to be installed as well as the installation.

The Contractor shall provide 72 hour advance notice to the Resident Engineer of any meetings scheduled with Utility(s) and provide the Resident Engineer with a copy of any correspondence with the Utility(s).

The Contractor shall make separate written notifications, with a copy to the Resident Engineer, a minimum of 4 State Business Days prior to when work may impact or be adjacent to Department electrical installations. For ITS facilities, notification shall be to the Bureau of Traffic Operations at the location and telephone number provided in the Special Provisions. For all other electrical installations, notification shall be made to the Regional Bureau of Electrical Maintenance at the location and telephone number provided in the Special Provisions. No Department-owned installation shall be accessed, modified, removed, or disturbed in any manner, without first making such notifications and attending a meeting with the Department if requested.

Bureau of Electrical Maintenance, North Region
200 Stierli Court
Mt. Arlington, NJ 07856-1322
Telephone: 973-770-5065
Bureau of Traffic Operations, North Region (TOCN)
670 River Drive
Elmwood Park, NJ 07407
201-797-3575

E. Damages. The Contractor shall protect, support, and secure all in-place utility facilities so as to avoid damage to them and any interruption of service. The Contractor shall not temporarily move existing or completed utility facilities without the Utility(s) written consent, and the facilities shall be as safe and permanent at completion as they were before the Contractor's involvement. In the event the Contractor damages a utility facility, including property service connections, the Contractor shall notify the Utility(s) immediately. The Utility(s) may complete the repairs or allow the Contractor to complete the repairs, with the Contractor responsible for any applicable time and expense. Repairs to Department electrical installations shall be as specified in Subsection 105.19 and the additional requirements for the fiber optic network of the Department ITS facilities as specified in this Subsection. The fiber optic network includes the conduit/cable, junction boxes/cabinets, and hubs.

Within two hours of any damage by the Contractor to the fiber optic network, the Contractor shall notify the Resident Engineer, in writing with a copy to the Traffic Operations contact specified in the Special Provisions, that the Contractor shall complete the repairs within 48 hours and have the repairs underway within 12 hours after the damage has occurred. If the written notice has not been received from the Contractor within two hours and/or the commencement of the repairs has not started within 12 hours, the Department may undertake and complete the repairs. The cost of repairs made by the Department for damages that are determined by the Resident Engineer to be the Contractor's responsibility shall be deducted from subsequent estimates. If the Contractor does not complete the repairs within 48 hrs, damages for lost services will be assessed to the Contractor at a minimum of $1000 per hour, or increased based on costs calculated by the Department, and deducted from subsequent estimates.

Should the Contractor, for its own convenience, cause the Utility(s) to incur costs not covered by the utility agreement, or delay the Utility(s), or incur costs without prior written approval of the Resident Engineer, the Contractor shall be responsible for these costs and delays. The Contractor shall pay the Utility(s) within 30 days of the Utility(s) request for cost reimbursement of any repairs and other incurred costs. If payment has not been made within 30 days, the Department may reimburse the Utility(s) for the Contractor generated costs and deduct these expenses from partial or final payment due the Contractor.

F. Railroads. In addition to the foregoing provisions, the following specific provisions relate to railroads only:

1. Railroad Traffic and Property. Where the Project includes work across, over, under, or adjacent to railroad tracks or railroad ROW, the Contractor shall safeguard the traffic, tracks, and appurtenances,

and other property of the railroad that may be affected by its Work. The Contractor shall comply with the regulations of the railroad relating to its Work, shall keep tracks clear of obstructions, and shall provide barricades, warning signs, lights, or other safety devices as required by the railroad. Payment for such safety devices will be made as specified in Section 617. Prior to the commencement of any work within the railroad ROW or on railroad facilities, the Contractor shall obtain the railroad's written approval of access, the method of construction, and the schedule of the Work. The Contractor shall provide a copy of the submittal and approval to the Resident Engineer.

Estimated railroad train schedules will be provided in the Special Provisions.

The safety and continuity of railroad operations shall be the first priority when working in proximity to the railroad. Railroad approval does not release the Contractor from responsibility or liability for any damage that the railroad may suffer, or for which the Contractor may be held liable, by the acts of the Contractor.

Fouling of railroad facilities' track, power lines, and signal systems occurs when the railroad parameters for normal operations are jeopardized because obstructions are in close proximity to the facilities. The Contractor shall obtain from the railroad its fouling parameters for the work site and observe the railroad's regulations concerning fouling. Construction equipment or material shall not be stored or operated within the fouling distance of the railroad facilities without written permission of the railroad, with a copy to the Resident Engineer.

The railroad may assign inspectors, engineers, or flagmen during the time the Contractor is engaged in work on railroad property for the general supervision of construction operations, to ensure adherence to the Contract Documents and applicable railroad requirements, and to ensure the use of approved construction methods.

If materials are to be hauled across the tracks of any railroad, the Contract Documents will provide for any new crossings required or for the use of any existing crossings. If the Contractor elects to use crossings other than those designated, it shall obtain written approval from the railroad with a copy of the approval to the Resident Engineer at least 10 State Business Days in advance.

Location	Speed	Number Per Day	Time

2. Railroad Insurance. The applicable insurance provisions are as specified in Subsection 107.23.

105.11 Construction Stakes, Lines, and Grades.

A. For Projects with Construction Layout as a Pay Item.

THE FIFTH PARAGRAPH IS CHANGED TO:

The Contractor shall complete all utility work layouts required after approval of the insurance certificates as specified in Subsection 107.23 and the Safety and Health Program as specified in Subsection 107.10. The Contractor shall notify the Utility(s) as specified in Subsection 105.09.

105.15 Field Office.

1. Construction Field Offices.

a Type A.

THE FIRST PARAGRAPH IS CHANGED TO:

Type A field office shall be of weatherproof construction located adjacent to the contractor's field office having a floor area of not less than 576 square feet and a ceiling height of not less than 7½ feet, and having partitions and doors providing three communicating rooms, one with a floor area of not less than 288 square feet and two with a floor area of not less than 144 square feet each.

PART (1) IS CHANGED TO:

(1) ___ multi-line touch-tone telephones and ___ telephone lines for use with the telephones installed as directed and operational in the Field Office and other facilities specified.

(a) ___ dedicated, operational telephone line(s) for Fax machines (s) and/or microcomputer system(s) modem use installed as directed in the Field Offices specified.

(b) ___ portable hand held cellular phone(s). The cellular telephone plan shall provide for the anticipated usage of approximately 300 minutes per telephone per month. Each of the cellular phones shall have as a minimum the following features:

1) Home rate with no roaming charges within the entire state
2) 832 Channel Compatible
3) Mute Function
4) Back Light Display with Battery Saver
5) Signal Strength Indicator
6) Individual Call Length Timer
7) Full Lock Function
8) 30 Memory Number Feature
9) Low Battery Warning
10) 70 Minute Continuous Use
11) 12 hour Standby Mode
12) Alphanumeric Display
13) Transmission Power 0.6 Watt
14) Passive Repeating Antenna for Vehicle
15) Spare high capacity Battery Pack
16) Home Charging Station
17) Cigarette lighter power adapter /charger
18) AC charging station
19) Hands-Free headset

(c) ___ pager units. The number should be an exchange local to the Project. The units shall have the following features:

1) Lighted Alphanumeric Display
2) Tone and Vibrator Alert
3) High Sensitivity
4) Message Storage
5) Statewide Coverage
6) Exchange Local to Project
7) LCD Readout

(d) ___ telephone answering machine

PART (17)
THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

(17) A microcomputer system compatible with the Department's "ACES" system, whether purchased new or previously used.

THE FIFTH PARAGRAPH IS CHANGED TO:

The microcomputer system (after the project data has been erased from the hard drive by the Department), manuals, instructions, software, and literature shall be removed and retained by the Contractor when no longer required as determined by the Resident Engineer. The data cartridges and data diskettes will become the property of the State.

THE FOLLOWING ARE ADDED TO PART (17)

The microcomputer system shall include the following:

(a) ____ base computer system(s) having at minimum:

1) Pentium IV Processor at 3.5 GHz or faster, Intel processor with Hyper Threading technology, with 1024 MB RAM, 512 MB Video RAM, mouse, mouse pad, 200 Gigabyte hard drive or larger (must be designated as drive C:), one DVD (+/-) Writer Drive, one CD-R Recordable Drive, and one 3½-

inch, 1.44 MB floppy diskette drive with multi-media card reader installed as the "A" drive. System must be USB 2.0 compactable.

2) 56K baud data/fax modem. (e.g., 3Com U.S. Robotics 56K Fax modem, 3Com U.S. Robotics Courier V.Everything/V.34 - 56K ITU / x2 Technology, or Hayes Accura 56K).
3) One wireless network card for each base computer system specified, when more than one base computer is specified.
4) One wireless Ethernet Hub Switch with appropriate number of ports and cables (e.g. Lynksys) and a print server.
5) One dedicated telephone line per computer to be used in conjunction with each of the microcomputer modem.
6) One high-speed broad band connection with a minimum speed of 3 Megabytes per second (mbps) with dynamic IP address per field office (DSL, Cable, etc.) for the duration of the project.
7) 19 inch or larger Flat Screen LCD monitor with tilt/swivel capabilities.
8) 250 Megabyte or larger Zip Drive internal or external with backup software for MS-Windows and DOS, and fifteen corresponding formatted data cartridges corresponding to the tape drive size (e.g., Iomega Zip Drive or equivalent).
9) 10 USB 1 GB Flash/Stick/Jump Memory Drives. (e.g. SanDisk Cruzer Micro 1 Gigabyte).
10) One Flatbed USB version 2.0 or greater Color Scanner. (e.g. H.P. or Cannon)
11) Uninterruptible power supply (UPS) - OMNI 1000 or approved equal (e.g., APC-1000 - American Power Corporation).
12) Surge protector for the entire computer workstation to be used in conjunction with the UPS (e.g., Zero Surge Power, Inc. - Point of Use - 2R-15 amp/120 volts).
13) Static mat, floor type, 4 by 5 feet or larger with grounding capabilities.
14) Computer workstation, printer stand, and/or table having both appropriate surface and chair height.
15) Five boxes of 3½-inch floppy diskettes that match the drive density of the 1.44 MB floppy diskette drive (ten per box).
16) 150 CD-R 700 MB (or larger) recordable CD's compatible to the CD drive and 100 recordable DVD's.
17) One floppy diskette holder (holds 50, 3½-inch floppy diskettes), and dust covers for the microcomputer, monitor, keyboard, and printer.
18) Two head cleaner kit for 3½-inch floppy diskette drive.
19) One can of compressed air and screen cleaning solution every other month of the duration of the project.

(b) One base printer having at minimum:

1) Color laser printer having HP PCL 5 emulation, with a minimum of 192 Megabytes of expanded memory, appropriate printer cable, and legal size paper tray (e.g., HP Color LaserJet 2500N or TN).
2) One set of appropriate printer toner cartridges every other month for the duration of the construction project.
3) One ten-ream carton of 8½" X 11" size paper (500 sheets per ream, weight: 2.2 ounces per square yard, color: white, grain: long, for laser printers and copiers) every two months for the duration of the construction project.
4) One ten-ream carton of legal size paper (500 sheets per ream, weight: 2.2 ounces per square yard, color: white, grain: long, for laser printers and copiers) every three months for the duration of the construction project.

(c) One software package, on CD-ROM with documentation, including:

1) Microsoft Windows, latest version with future upgrades for the duration of the entire project.
2) Microsoft Office Professional latest version. Software package should contain the following: word processor, spreadsheet, and database.

3) Norton's System Works for Windows, latest version, or compatible software package with future upgrades and latest virus patches.
4) Anti-Virus software, latest version with monthly updates for the duration of the entire project (e.g., McAfee Anti Virus, Dr. Solomon's, or Norton's Anti Virus).
5) Visio Professional Graphics Software for Windows, latest version.

(d) ___ base printer(s) for Primavera having at minimum:
1) Color Inkjet printer of current technology, with appropriate printer cable.
2) Ink cartridge replacements, one of each color, every other month for the duration of the construction project.
3) One 10-ream carton of 8½ X 11 inches size paper (500 sheets per ream, weight: 22 ounces per square yard, color: white, grain: long, for laser printers and copiers) every three months for the duration of the construction project.

(e) ___ Primavera SureTrak or equivalent software, latest version.
(e) ___ Primavera Project Planner (P3) or equivalent software, latest version.
(e) ___ Primavera Project Planner for the Enterprise (P3e) or equivalent software, latest version.

To be approved as a Substitute or "Or Equal", the software must be completely compatible with the Department database that contains the Capital Program Management's design process schedule and budget, as well as the construction scheduling from design through construction. The software shall be compatible with the hierarchy of the coding and able to import and export data within the Department's Capital Program Management's database without distortion of any coding or relationships contained in the database.

The Contractor shall only utilize equivalent or compatible software for a project, which has received written approval from the Department in accordance with the most current NJDOT Capital Program Management Construction Scheduling Standard Coding and Procedures for Designers and Contractors Manual. The approved equivalent/compatible software utilized shall not vary throughout the construction phase.

The following additional equipment shall be furnished by the Contractor for the exclusive use of the Resident Engineer. This equipment shall conform to the applicable ASTM designation, when appropriate, and be in good working condition. The Contractor shall repair or replace damaged equipment throughout the duration of the Contract. The equipment shall become the property of the Contractor after Acceptance:

THE FOLLOWING IS ADDED:

(18) ___ TV/VCR (Video Cassette Recorder) Combo with: 4-head VCR, crystal-clear-slow-motion, still frame, and frame advance, and index search.
(19) ___ video camcorder with video tripod, extra battery, battery charger, capability to play video tape on standard VCR Player, and one blank video cassette tape per month.

105.19 Maintenance During Construction.

THE THIRD PARAGRAPHS IS CHANGED TO:

Any damage to the Roadway due to the Contractor's operations shall be repaired at no Additional Compensation, except as specified in Subsection 107.22. The Contractor shall complete within 24 hours specific repairs directed by the Department, except where the requirements are specified by a Subsection. Nothing in this Subsection shall be construed to limit or change the risks assumed by the Contractor as specified in Subsection 107.22.

THE SIXTH PARAGRAPHS IS CHANGED TO:

The Department may direct the Contractor to construct Bituminous Concrete Patch as specified in Section 402 to maintain sections of traveled way and shoulders in a smooth riding condition at all times including seasonal shutdowns. Payment for Bituminous Concrete Patch will be made as specified in Section 402 except for those areas that are damaged or created by the Contractor's operations.

SECTION 106 – CONTROL OF MATERIAL

106.03 Materials, Inspections, Tests, and Samples.
THE SUBSECTION HEADING IS CHANGED TO:
106.03 Materials, Inspections, Tests, Samples and Certified Training.

B. Sampling and Field Testing of Soil Aggregates.
THIS SIXTH PARAGRAPH IS CHANGED TO:

Sampling and testing of aggregates by the Department that meet the Specifications and are used in the Work will be performed without cost to the Contractor.

THE FOLLOWING SUBPART IS ADDED:

D. Sharing of Pay-Adjustments for Portland Cement Concrete. Positive and negative pay-adjustments, as defined in Subsection 914.02, Subpart E, are awarded to encourage high quality construction and, when necessary, to recoup the anticipated extra costs to the Department resulting from poor quality construction. The manner in which positive and negative pay-adjustments are to be shared by the prime Contractor and Subcontractors or Producers is to be negotiated by the affected parties. A letter signed by both parties, stating that an agreement has been reached between the parties shall be provided to the Engineer before commencement of Work. Nothing contained herein shall create right of action either in law or equity against the Department.

106.06 Materials Field Laboratory
THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The Contractor shall annually pay all fees necessary to procure and maintain a Uniform Code Type Four Fire Permit according to regulations of the New Jersey Department of Community Affairs. Additional information concerning the permit fees and processing of the application may be obtained by contacting the Bureau of Materials.

1. Laboratory.
b.
THE FOLLOWING IS ADDED:

(19) Hands-Free headset

z.
THE FIRST SENTENCE OF SUBPART Z. IS CHANGED TO:

Equipment and test apparatus conforming to that listed in AASHTO T 310 when the Pay Item "Nuclear Density Gauge" appears in the Proposal.

SUBPART (1) IS CHANGED TO:

(1) Conformance to AASHTO T 310,

aa
THE ENTIRE PART AA TEXT ARE CHANGED TO:

aa Microcomputer workstation hardware and software requirements as indicated. The microcomputer system shall include the following:
(1) One base computer system(s) having at minimum:
a) Pentium IV Processor at 3.5 GHz or faster, Intel processor with Hyper Threading technology, with 1024 MB RAM, 512 MB Video RAM, mouse, mouse pad, 200 Gigabyte hard drive or larger (must be designated as drive C:), one DVD (+/-) Writer Drive, one CD-R Recordable Drive, and one 3½-inch, 1.44 MB floppy diskette drive with multi-media card reader installed as the "A" drive. System must be USB 2.0 compactable.

b) 56K baud data/fax modem. (e.g., 3Com U.S. Robotics 56K Fax modem, 3Com U.S. Robotics Courier V.Everything/V.34 - 56K ITU / x2 Technology, or Hayes Accura 56K).
c) One wireless network card for each base computer system specified, when more than one base computer is specified.
d) One wireless Ethernet Hub Switch with appropriate number of ports and cables (e.g. Lynksys) and a print server.
e) One dedicated telephone line per computer to be used in conjunction with each of the microcomputer modem.
f) One high-speed broad band connection with a minimum speed of 3 Megabytes per second (mbps) with dynamic IP address per field office (DSL, Cable, etc.) for the duration of the project.
g) 19 inch or larger Flat Screen LCD monitor with tilt/swivel capabilities.
h) 250 Megabyte or larger Zip Drive internal or external with backup software for MS-Windows and DOS, and fifteen corresponding formatted data cartridges corresponding to the tape drive size (e.g., Iomega Zip Drive or equivalent).
i) 10 USB 1 GB Flash/Stick/Jump Memory Drives. (e.g. SanDisk Cruzer Micro 1 Gigabyte).
j) One Flatbed USB version 2.0 or greater Color Scanner. (e.g. H.P. or Cannon)
k) Uninterruptible power supply (UPS) - OMNI 1000 or approved equal (e.g., APC-1000 - American Power Corporation).
l) Surge protector for the entire computer workstation to be used in conjunction with the UPS (e.g., Zero Surge Power, Inc. - Point of Use - 2R-15 amp/120 volts).
m) Static mat, floor type, 4 by 5 feet or larger with grounding capabilities.
n) Computer workstation, printer stand, and/or table having both appropriate surface and chair height.
o) Five boxes of 3½-inch floppy diskettes that match the drive density of the 1.44 MB floppy diskette drive (ten per box).
p) 150 CD-R 700 MB (or larger) recordable CD's compatible to the CD drive and 100 recordable DVD's.
q) One floppy diskette holder (holds 50, 3½-inch floppy diskettes), and dust covers for the microcomputer, monitor, keyboard, and printer.
r) Two head cleaner kit for 3½-inch floppy diskette drive.
s) One can of compressed air and screen cleaning solution every other month of the duration of the project.

(2) One base printer having at minimum:
a) Color laser printer having HP PCL 5 emulation, with a minimum of 192 Megabytes of expanded memory, appropriate printer cable, and legal size paper tray (e.g., HP Color LaserJet 2500N or TN).
b) One set of appropriate printer toner cartridges every other month for the duration of the construction project.
c) One ten-ream carton of 8½" X 11" size paper (500 sheets per ream, weight: 2.2 ounces per square yard, color: white, grain: long, for laser printers and copiers) every two months for the duration of the construction project.
d) One ten-ream carton of legal size paper (500 sheets per ream, weight: 2.2 ounces per square yard, color: white, grain: long, for laser printers and copiers) every three months for the duration of the construction project.

(3) One software package, on CD-ROM with documentation, including:
a) Microsoft Windows, latest version with future upgrades for the duration of the entire project.
b) Microsoft Office Professional latest version. Software package should contain the following: word processor, spreadsheet, and database.
c) Norton's System Works for Windows, latest version, or compatible software package with future upgrades and latest virus patches.

d) Anti-Virus software, latest version with monthly updates for the duration of the entire project (e.g., McAfee Anti Virus, Dr. Solomon's, or Norton's Anti Virus).
e) Visio Professional Graphics Software for Windows, latest version.

Hardware and software shall be acceptable to the Regional Construction and Resident Engineers before purchase/installation. All software shall be compatible with the computer's operating system.

The microcomputer system, whether purchased new or previously used, shall be installed in the materials field laboratory.

At the time of installation, the Contractor shall ensure that the system is fully operational and meets all Department requirements. All software listed above shall be installed by the Contractor and maintained in the materials field laboratory. The Contractor shall configure the software to operate with the hardware provided. Any accessories for the microcomputer shall be compatible with the microcomputer.

The Contractor will not be permitted to use this microcomputer system at any time. It is being supplied solely for the Department's use.

The Contractor shall forward all manuals, instructions, software, and literature received with the microcomputer system to the Resident Engineer. The Contractor is responsible for maintaining the microcomputer system in good working condition. Any part of the microcomputer system that becomes inoperable or defective, during the duration of the construction project, shall be replaced by the Contractor within 48 hours.

The microcomputer system (after the project data has been erased from the hard drive by the Department), manuals, instructions, software, and literature shall be removed and retained by the Contractor when no longer required as determined by the Resident Engineer. The data cartridges and data diskettes will become the property of the State.

THE LAST SEVEN PARAGRAPHS ARE CHANGED TO:

Setting up the materials field laboratory shall consist of furnishing the laboratory and enclosure complete with furniture, equipment, electricity, water, heating, air-conditioning, installation and activation of telephone lines, telephone sets (touch tone and cellular), pager units, sanitary facilities, and lavatory supplies.

Maintenance of the materials field laboratory, for the time required, shall consist of maintaining the furniture, equipment, and utilities which includes the cost of telephone fixed monthly service charges, cellular phone fixed monthly service charges for the plan specified and pager services, providing lavatory supplies, janitorial and waste disposal services weekly, restocking of the first aid box, and snow removal services. Maintenance of the materials field laboratory shall also include monthly rent.

Payment for nuclear density gauge will be made by the number of units supplied.

Payment for setting up the materials field laboratory will be made by the number of units.

Payment for the maintenance of the materials field laboratory will be made for each month or fraction thereof that the materials field laboratory is required, except that payment will not be made for any month or fraction thereof in which the Contractor is assessed liquidated damages according to Subsection 108.16.

Payment will be made under:

Pay Item	*Pay Unit*
NUCLEAR DENSITY GAUGE	UNIT
MATERIALS FIELD LABORATORY SET-UP	UNIT
MATERIALS FIELD LABORATORY MAINTENANCE	MONTH

Payment for telephone service will be made according to Subsection 105.15.

106.09 Storage and Handling of Materials.
THE ENTIRE TEXT IS CHANGED TO:

Materials shall be stored to ensure the preservation of their quality and fitness. Stored materials, even though approved before storage, may again be inspected before their use on the Project. Stored materials shall be located so as to facilitate their prompt inspection. With the approval of the Department, portions of the ROW may be used for storage purposes and for the placing of the Contractor's plant and equipment, but any additional space must be provided by the

Contractor at the Contractor's expense. Equipment and materials shall be placed behind barriers or crash cushions, or stored more than 30 feet from the traveled way. The barriers and crash cushions must be approved before installation. Furnishing, placing, and removing the barriers and crash cushions shall be at no Additional Compensation. No materials shall be stored within restricted areas noted on the plans. No materials shall be stored within 10 feet, plus the extended boom length of the largest crane on site, of overhead high voltage power lines. The high voltage power line is defined as an aerial power line having a voltage differential in excess of 750 volts between any pairs of conductors or between any conductor and ground. The Contractor shall be responsible for any power outage or de-energization associated with the Contractor's activity in the vicinity of the power lines. Private property shall not be used for storage purposes without written permission of the owner or lessee, and any other approvals, including those as specified in Subsection 107.05. Copies of such written permission shall be furnished to the Resident Engineer before storage. Storage sites shall be restored to their original condition at no Additional Compensation.

106.13 Fuel Price Adjustment.

THE FIFTH PARAGRAPH IS CHANGED TO:

The monthly fuel price index will be posted every month on the Department's web site: www.state.nj.us/transportation/eng/CCEPM/PriceIndex.shtm.

THE FIRST SENTENCE OF THE SIXTH PARAGRAPH IS CHANGED TO:

The basic fuel price index will be the previous month's fuel price index before receipt of bids.

THE EIGHTH PARAGRAPH IS DELETED:

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107.01 Legal Jurisdiction.

THE ENTIRE SUBSECTION IS CHANGED TO:

1. **Applicable Law.** This Contract shall be construed and shall be governed according to the Constitution and laws of this State.
2. **Sovereign Immunity.** The State by entering into this Contract does not waive its Sovereign Immunity, except as provided by the New Jersey Contractual Liability Act, NJSA 59:13-1 *et seq.* The rights or benefits provided the Contractor in this Contract which exceed those provided under the Act are contractual in nature and shall not be deemed to expand the waiver of Sovereign Immunity as set forth in that Act.
3. **Litigation of Claims by Contractor.** The Contractual Claims Resolution Process is not an administrative procedure but is contractual in nature, intended to review properly filed and documented claims. Pursuant to N.J.C.A. 16:45-1.3, exhaustion of the Claims Resolution Process as set forth under the Specifications is not a prerequisite to the filing of a legal action against the Department or State. The Contractor, however, must fully comply with all of the terms and conditions of the Contractual Liability Act, N.J.S.A. 59:13-1 *et seq*. prior to commencing a legal action. Therefore, where a Contractor brings a legal action, arising out of a Contract, against the Department or State or any officials or employees, thereof, arising out of or related, directly or indirectly, to a claim pending against the Department; the Contractual Claims Resolution Process, at any step, shall terminate as to that claim(s) or related claims being litigated, no matter which level of review the claim may be at when the legal action is filed. Furthermore, once the Contractor files a legal action any claim(s), related to that legal action will no longer qualify to be reviewed by the Claims Committee or to have the same claim(s) resolved under the Non-Binding Mediation Procedure or at any other Level of review. Such claim(s) will, thereafter, be resolved under the legal action subject to the provisions of the Contractual Liability Act, N.J.S.A. 59:13-1 *et seq*. unless and until the legal action is dismissed with or without prejudice. The Contractor may submit to the Department for processing through the various steps of the Contractual Claims Resolution Process any claims that are unrelated to the pending litigation subject to the terms of the Specifications and the Contractual Liability Act N.J.S.A. 59:13-1 *et seq*.
4. **Completion of the Contract.** The Completion of the Contract shall control as to any issue that may arise regarding the particular point in time when a Contractor may be barred from recovering against the State as provided under N.J.S.A. 59:13-5 *et seq*. The Contractual Claims Resolution Process and the various steps thereof may continue beyond the Completion of the Contract; however, the Contractual Claims Resolution

Process will not in any manner, expressed or implied, extend any statute of limitation that may apply as to a claim. The Contractor by entering into the Contract with the Department agrees no further notice to the Contractor regarding the provisions stated in this Section are required. The Contractor also agrees to be responsible for compliance with all statutes of limitation and compliance with the various provisions of the Contractual Liability Act, N.J.S.A. 59:13-1 *et seq*.

5. **Subcontractor(s).** Pursuant to Subsection 108.02, the Department will not process or review any claims submitted by a subcontractor(s) or supplier(s) at any tier. All claims submitted by the Contractor must be an obligation or liability of the Contractor and cannot be merely a pass through of a claim by a subcontractor or by a supplier.

107.02 Notice of Potential Claim and the Administrative Process for the Resolution of Contract Disputes.
THE HEADING AND THE ENTIRE SUBSECTION IS CHANGED TO:

107.02 Notice of Claim and the Contractual Claim Resolution Process.

1. **Notice.**
   a. **Obligations.** The various notice provisions set forth in this Contract are contractual obligations assumed by the Contractor by the act of executing the Contract. The Contractor shall be responsible to notify the Department in writing within the time frame as may be mandated in an applicable Subsection of the Specifications as well as within 90 days of any situation or occurrence which may potentially result in or be the basis of a belief that additional compensation or an extension of time is due from the State, except where permission to file a "late notice of claim" has been obtained by the Contractor from the Superior Court in accordance with N.J.S.A. 59:13-6. The Department is not authorized to expand, reduce or waive either the contractual or statutory time limitations within which a notice of claim is to be filed with the Department. Any required notice shall be given only on the Contractual Notice Form provided by the Department. Submission of a Contractual Notice Form is required in order to comply with the notice requirements of the New Jersey Contractual Liability Act, N.J.S.A. 59:13-5 *et seq.,* provided such notices are given within the time limits established by that Act. The Contractor, by executing the Contract, agrees that the only evidence of compliance with the notice provisions of the Contractual Liability Act, N.J.S.A. 59:13-5 *et seq.,* and the Specifications shall be the filing of a fully completed (except that the amount of the claim need not be stated when unknown) Contractual Notice Form with the Department, and that no other documents sent or delivered to the Department or any of its officers or employees shall satisfy the statutory and/or contractual notice requirements.
   b. **Time.** The Contractor, by the act of executing the Contract, acknowledges that it will be forever barred from recovering against the State if it fails to give timely notice in accordance with N.J.S.A. 59:13-5 *et seq.,* on the Contractual Notice Form required under this Subsection of any happening of an event, thing, or occurrence or of an act or failure to act, by the Department and that the Contractor is solely responsible for complying with the various notice requirements and the timeliness of a claim as set forth under the Contractual Liability Act, N.J.S.A. 59:13-5 *et seq*. and the Specifications.
   c. **Notice Form.** The Contractual Notice Form shall be completed in its entirety for each and every claim and shall be signed by an authorized representative of the Contractor. Any Contractual Notice Form filed which does not provide all of the minimum information listed in this Subsection will be considered incomplete for the purpose of processing the claim under the Contractual Claim Resolution Process and no formal discussions or meetings concerning a claim filed on an incomplete Form will take place. A Contractual Notice Form which identifies the amount of the claim as being unknown may be considered by the Department as only satisfying the notice requirements as set forth under the Contractual Liability Act, N.J.S.A. 59:13-5 et seq., as long as the notice of claim is timely filed and provides all of the other minimum information on or attached to a properly executed Contractual Notice Form. However, for any claim requesting Additional Compensation, it shall not be sufficient to begin the Claim Resolution Process until the exact amount is provided according to 3.j. below. The Contractor's act of executing the Contract shall be construed to be an acknowledgment by the Contractor that it understands that the processing of a claim by the Department at any step of the Contractual Claims Resolution Process shall not constitute a waiver by the State of any defense that a claim was filed out of time and is thereby barred under the terms of the Contractual Liability Act or of any defense that there is no merit to the "claim being asserted by the Contractor".

2. **Steps of Review.** The Contractual Claim Resolution Process is sequential in nature and is composed of the following steps:

   Step I: Review by the Resident Engineer;
   Step II: Review by the Regional Dispute Board;
   Step III: Review by the Department Claims Committee;
   Step IV: Non-Binding Mediation.

   Processing through the steps is subject to the following conditions:

   a. No claim will be accorded a particular level of review unless and until the claim has been reviewed at the preceding step. Additionally, there will be no further review of the claim, unless and until the Contractor provides, in writing, that the decision of a review step within the specified timeframe is unacceptable and further requests that the claim be forwarded to the next step. Absent the written submittal of this information the claim will be considered withdrawn from the Contractual Claim Resolution Process. If at any step in the process, a claim is resolved, the Contractor must sign an unconditional release, furnished by the Department, as to any and all matters arising from the claim.

   b. In order to begin the Contractual Claim Resolution Process the Contractor must state in writing that all documentation in support of the claim, as required under this Subsection, has been provided to the Department as part of or attached to the contractually required Contractual Notice Form and that the Contractor has requested that the review process, as outlined above, begin. The Resident Engineer will take no formal action until this notification is received and the Resident Engineer independently determines that the Contractor has in fact satisfied the requirements of this Subsection. If the documentation submitted by the Contractor is determined to be incomplete, the Resident Engineer will notify the Contractor that the review process cannot begin and include a list of missing components required to start the process. When the additional material is submitted, the Contractor is required to again notify the Resident Engineer in writing that all documentation in support of the claim has been provided and the Contractual Claim Resolution Process should begin. The Contractor shall be limited to the documentation provided to the Resident Engineer at the beginning of Step I, in support of a claim, throughout all steps of the Claim Resolution Process. The submission of additional information by the Contractor at any step beyond Step I, shall be cause for the claim to revert back to Step I for review at each and every Step. The Resident Engineer will provide written notice to the Contractor when Step I was begun.

   c. When the value of the claim submitted by the Contractor is $20,000 or less, the Step II review will be the final step in the Contractual Claim Resolution Process. In such a case, the decision of the Regional Dispute Board will be final and there will be no further contractual review.

   d. Where there has been a determination, at both Step I and Step II, that the specifications do not provide a contractual basis for the resolution of the claim submitted by the Contractor or that the Notice of Claim was filed late without obtaining permission of the Superior Court, the Department reserves the right to conclude the Contractual Claim Resolution Process at the end of the Step II review. In such instance, the Secretary of the Department Claims Committee will provide the Contractor with the reason(s) for the no further review determination and rejection of the claim. However, where the Claims Committee does review a claim, there shall not be deemed a waiver by the Department of any defense that the Notice was filed late or that there does not exists a contractual basis for resolution.

3. **Information Required.** As a minimum, all of the following information must accompany each claim and be incorporated into or attached to the contractually required Contractual Notice Form:

   a. A detailed factual statement of the claim providing all necessary dates, locations, and items of work affected by the claim.

   b. The date on which facts arose that gave rise to the claim.

   c. A copy of any notice given to the Department pursuant to any other Subsection of the Contract which relates to the matter giving rise to the claim.

   d. The name, function, and activity of each State individual, official, or employee involved in or knowledgeable about the claim.

   e. The specific provisions of the Contract which support or mitigate against the claim and a statement of the reasons why such provisions support or mitigate against the claim.

   f. If the claim relates to a decision of the Department which the Contract leaves to the Department's discretion or as to which the Contract provides that the Department's decision is final, the Contractor shall set out in detail all facts supporting its contention that the decision of the Department was fraudulent, arbitrary or capricious.

g. The identification of any documents and the substance of any oral communications relating to such claim attaching same to the Form.

h. A statement as to whether the additional compensation or extension of contract time sought is based on the operation of the provisions of the Contract or an alleged breach of contract.

i. If an extension of contract time is sought, the specific days sought and the basis for such claim, supported by the Contractor's approved baseline progress schedule and updates, as well as a fragment, which will include a time impact evaluation, depicting the delay according to Subsection 108.04.

j. If additional compensation is sought, the exact amount sought and a breakdown of that amount into the following categories:
   (1) Direct Labor
   (2) Direct Materials
   (3) Direct Overhead as specified in Subsections 109.03 and 109.04.
   (4) Subcontractor's Work
   (5) Other categories as specified by the Contractor.
   (6) The basis and manner of the Contractor's calculations of the additional compensation claimed.

The Department will not determine liability separate and apart from damages. The Contractual Claims Resolution Process shall not be bifurcated. The Department shall review liability and damage valuation issues at the same time.

4. The Procedures for the Process.

a. Step I, Resident Engineer Review. The Resident Engineer will render a written decision regarding the claim presented within 30 State Business Days of the Resident Engineer's determination that the information provided by the Contractor on the Contractual Notice Form in support of the claim satisfied the requirements to begin Step I. This time limit may be extended by mutual agreement of the parties. Within 15 State Business Days of the receipt of the decision by the Resident Engineer, the Contractor shall either accept or reject the decision in writing; or upon failure to complete this, the claim will be considered withdrawn from the Contractual Claim Resolution Process and there will be no further review of the claim. If the Contractor accepts the decision, such acceptance shall include execution of an unconditional release furnished by the Department effective upon payment.

b. Step II, Regional Dispute Board Review. If the Contractor provides a written rejection of the Resident Engineer's decision and a request to forward the claim to Step II, the Resident Engineer will forward the claim and supporting information previously submitted by the Contractor to the Regional Dispute Board within five State Business Days. The Regional Dispute Board will schedule and hold a meeting to review the claim with the Contractor within 30 State Business Days of receipt of the said claim information from the Resident Engineer. This time limit may be extended by mutual agreement of the parties. The Regional Dispute Board will issue a written decision regarding the claim within 20 State Business Days of the meeting.

Within 15 State Business Days of receipt of the Regional Dispute Board decision, the Contractor shall either accept or reject it in writing; or upon failure to complete this, the claim will be considered withdrawn and the Contractual Claim Resolution Process shall be considered to be concluded for that particular claim. If the Contractor accepts the decision, such acceptance shall include execution of an unconditional release furnished by the Department effective upon payment.

The Director, Construction Services and Materials, may request an informal meeting with the Contractor to discuss the then pending claim(s) after the Step II decision has been issued and sent to the Contractor, but prior to the matter being reviewed at the next step, subject to the mutual consent of the Contractor and the Department.

c. Step III, Claims Committee Review. A written request for a Step III review of the claim is to be made to the Secretary of the Department Claims Committee, P.O. Box 600, Trenton, New Jersey 08625-0600 with a copy to the Director, Construction Services & Materials. The Contractor may request that the Department Claims Committee immediately review claims, which are unresolved after review by the Regional Dispute Board,, when the following conditions are met:

1. A claim or the combination of claims exceed $250,000; or
2. It is mutually agreed to by the Contractor and the Department.

However, when a project becomes 75 percent complete by contract time or dollar amount, which ever first occurs, claims that are unresolved at Step II will be reviewed at a single session of the Department Claims Committee after the Completion of the Work.

Additionally, the Contractor may request at the time of issuance of the Final Certificate that all unresolved claims, with the exception of the exclusionary cases as provided for in this Subsection, that have gone through the Steps I and II of the Contractual Claim Resolution Process, and which have not been presented at Step III of the Contractual Claim Resolution Process, be reviewed by the Department Claims Committee as provided for in this Subsection. The Contractor's written request must accompany its exceptions to the Final Certificate, with a copy sent to the Secretary of the Department Claims Committee and shall be made no later than 30 State Business Days after the issuance of the Final Certificate.

The Secretary of the Department Claims Committee will schedule a Claims Committee meeting with representatives of the Contractor and the Region, to be held within 45 State Business Days of the receipt of the claim information. This time limit may be extended by mutual agreement of the parties. The Department Claims Committee will notify the Contractor in writing of its decision on the claim(s) within 45 State Business Days of the meeting, stipulating the terms of any resolution of the claims. If the Department Claims Committee determines after review of the claims that no resolution and no further payment is warranted, it shall notify the Contractor in writing of its decision. Within 15 State Business Days of the receipt of the Department Claims Committee decision, the Contractor shall either accept or reject it in writing, or upon failure to complete this, the claim will be considered withdrawn and the Contractual Claim Resolution Process shall be considered to be concluded for that particular claim. If the Contractor accepts the decision, such acceptance shall include execution of an unconditional release furnished by the Department effective upon payment. If the Contractor rejects the decision, there will be no further review of the claim unless the Contractor submits a written request for the utilization of Non-Binding Mediation.

d. Step IV, Non-Binding Mediation.

(1) Conditions. The Contractor may request at any time during the Project, but no later than 30 State Business Days after issuance of the Final Certificate, that any claim unresolved by the Department Claims Committee be elevated to Step IV. The request must be in writing to the Secretary, Department Claims Committee, P.O. Box 600, Trenton, New Jersey 08625-0600. No claim will be elevated to Step IV unless all of the following conditions are satisfied:

(a.) The claim has been reviewed by the Department Claims Committee.

(b.) The Contractor has escrowed its bid preparation documents as required under Subsection 103.06 and the documents are still being held in escrow.

(c.) The Contractor has entered into a Non-Evidential agreement to the effect that any statement or information provided during the Non-Binding Mediation proceedings shall not be evidential in any legal proceeding unless obtained by other discoverable means.

(d.) The Contractor has entered into a cost sharing agreement to equally share the cost of using Non-Binding Mediation in accord with Department issued forms.

(e.) The utilization of Non-Binding Mediation has been mutually agreed to by the Department and the Contractor; and

(f.) Prior to the commencement of the Non-Binding Mediation the parties shall confer with one another for the purpose of resolving the format of presenting the claim summary, supporting information, opening statements, and responses.

Failure by the Contractor to request Non-Binding Mediation within the required time period shall constitute a waiver by the Contractor of any utilization of the Non-Binding Mediation Step.

(2) Forms. Where the Contractor requests that Non-Binding Mediation be conducted, the Department will forward to the Contractor the required Non–Evidential and cost sharing agreement forms which shall be executed by the Contractor and returned to the Department within ten State Business Days. The failure by the Contractor to return the fully executed Non-Evidential and cost sharing agreements to the Department within the ten-day period shall constitute a waiver by the Contractor of the availability of Step IV.

(3) Mediator. The Department will select the Mediator to be utilized for the Non-Binding Mediation from a list of candidates submitted by the Contractor. The Contractor shall submit the names of six proposed Mediators, along with a biographical background listing the experience and qualifications of each candidate. Candidates may be from the same employment category or disciplines, such as construction, mediation, partnering facilitation, consulting engineer, attorney, judiciary (retired), accountant, architect, etc.

A candidate may have been used for mediation purposes for this Project or another project but shall not have any other relationships with either the Department or the Contractor for a period of two years preceding the request for Step IV. If the Department determines that none of the candidates submitted are acceptable, the Department will request and the Contractor shall submit four additional Mediator candidates. The Contractor shall submit this additional list within five State Business Days of the receipt of the written request. Upon mutual agreement, the Mediator can be an individual proposed by the Department.

(4) Escrow Documents. Once the Contractor has fully executed the required Non-Evidential and cost sharing agreements, its escrowed bid documents will be released upon request of the Department Claims Committee Chairperson solely for the exclusive use of the Mediator, the Department's selected Negotiator(s), the Department Regional Representative(s) and the Contractor Representative(s) participating in the Mediation session. These documents will be used by the Department as part of the Contractual Claims Resolution Process only to resolve the pending claims except it may seek such documents through the discovery process in the event mediation is not successful and litigation ensues.

(5) Meeting. The Secretary of the Department Claims Committee will schedule a meeting for the Non-Binding Mediation of the submitted claims to be held within 30 State Business Days of the return of the executed Non-Evidential and cost sharing agreements. The meeting time limit may be extended by mutual agreement of the parties. The Secretary of the Department Claims Committee will issue the recommendations of the Department's Negotiator to the Commissioner for action within 15 State Business Days of the Non Binding Mediation session. The Commissioner, or their designee, will accept, reject, or modify the recommendation of the Department Negotiator and notify the Contractor of the decision within 15 State Business Days.

(6) Decision. The Contractor shall accept or reject the decision within 15 State Business Days of notification of the Commissioner's decision. If the Contractor accepts the decision of the Commissioner, or their designee, such acceptance shall be in writing and include execution of an unconditional release furnished by the Department effective upon payment. If the Contractor fails to accept or reject the Commissioner's decision within 15 State Business Days, the decision of the Commissioner will be withdrawn and the Contractual Claims Resolution Process shall be deemed concluded as to that particular claim under review.

After submission of the recommendation to the Commissioner, the bid documents released from escrow will be returned to the escrow agent for continued escrow in the designated repository.

107.22 Risks Assumed by the Contractor

SUBPART 1 IS CHANGED TO:

1. Risks of Loss or Damage to the Permanent Construction. Until Acceptance, and within the limits of the Project's work, the Contractor shall bear the risk of all loss or damage to all permanent construction and temporary construction performed under this Contract and to materials, whether or not it has received payment for such construction or materials under Subsection 109.05, 109.06, or 109.07, except payment will be made to the Contractor for the repair or replacement of any permanent element of the construction which has not been accepted by the Department, if the element of the work damaged is completed to the stage of serving its intended function and is subsequently damaged by accident by public traffic. In order to receive payment, the Contractor must supply satisfactory evidence that such damage was caused by a public traffic accident which was not caused by vandalism or by the equipment of the Contractor or any of its subcontractors or suppliers. Satisfactory evidence shall generally be limited to: accident reports filed with the Division of Motor Vehicles, police agencies or insurance companies; statements by reliable, unbiased eye witnesses; identification of the vehicle involved in the accident. Physical evidence that the damage was caused by a motor vehicle (such as tire marks or broken headlight glass) will not be sufficient unless it can be clearly shown that the damage was not caused by the Contractor's vehicles or by vandalism. The Contractor shall take every precaution, as allowed by the Contract against injury or damage to any part of the construction or to materials by the action of the elements, the traveling public, vandalism, or from any other cause, whether arising from the execution or the non-execution of the work. The Contractor shall promptly repair, replace, and make good any such damage or loss without cost to the Department. The Contractor shall not bear such risk of loss or damage, which arises from acts of war or floods, tidal waves, earthquakes,

cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon unless such loss or damage is covered by insurance.

107.23 Insurance.

6. Railroad Insurance.

Insurance coverage shall be procured and maintained for the following railroad(s):

It is estimated that ___ percent of the Project cost is located within or adjacent to the railroad right-of-way.

SECTION 108 - PROSECUTION AND PROGRESS

108.02 Subcontracting.

There are no Specialty Items in this Project.

108.03 Commencement of Work.

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Construction operations shall not begin until the Contractor has supplied, and the Engineer has accepted, the preliminary schedule and other certifications, forms, schedules, and any other information required by the Contract Documents, and until the Contractor has established a field office as required by Subsection 105.15.

108.04 Progress Schedule and Prosecution of the Work.

THE ENTIRE SUBSECTION IS CHANGED TO:

In scheduling and executing the Work, the following shall be complied with:

1. Progress Schedules. The progress schedule shall conform to and incorporate the following requirements:

a. General.

(1) The work shall be monitored by a detailed CPM schedule. The CPM schedule shall be developed utilizing the most current NJDOT Capital Program Management Construction Scheduling Standard Coding and Procedures for Designers and Contractors Manual and the NJDOT Primavera template project containing the latest standard coding. The manual and template are available from the Bureau of Quality Management Services.

The CPM schedule shall consist of diagrams and accompanying mathematical analyses. The scheduling of submittals, procurement, construction, and all else necessary to complete the Work as described in the Contract Documents, is the responsibility of the Contractor. The requirement for the CPM schedule is included to ensure adequate planning and execution of the Work and to assist the Department in appraising the reasonableness of the proposed schedule, as well as its compliance with Contract requirements.

The CPM schedule is the Contractor's committed plan to complete all work within the allotted time. The Contractor assumes full responsibility for the prosecution of the Work as shown. The CPM schedule shall be based on and derived from detailed schedules used to complete all Contract activities.

(2) No claim for extension of time due to extra work or any other type of delay will be considered unless the baseline schedule has been approved and monthly updates are current and submitted within the time limits stated.

(3) No claim for additional compensation as specified in Subsection 109.04 will be considered unless the baseline schedule has been approved and monthly updates are current and submitted within the time limits stated.

(4) The CPM preliminary, baseline, and updated schedules shall be submitted in electronic format on a floppy diskette or compact disk, in addition to the required number of copies specified in b. (1) and b. (2) below.

(5) Once the CPM baseline schedule has been approved, the Contractor shall not deviate therefrom without first notifying the Engineer in writing and schedule is updated in accordance with 1.h. and 1.i. below.

b. Submittals. The CPM schedule shall consist of the following two distinct initial submittals:

(1) **Preliminary Schedule.** No later than 10 State Business Days after execution of the Contract, the Contractor shall submit to the Engineer for review and approval or rejection and return a preliminary schedule. The contractor shall submit six copies of:

(a) A CPM time-scaled diagram defining the Contractor's planned activities during the first 90 Calendar Days. For projects with a construction cost over $ 40 million, a CPM time-scaled diagram defining the Contractor's planned activities during the first 120 Calendar Days.

(b) A summary network for the remainder of the Contract time. The preliminary schedule shall indicate all milestone activities expected to be completed or partially completed before submission and approval of the CPM baseline schedule as specified in b. (2) below.

(c) All multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the preliminary schedule.

(d) The Work shall not begin until the preliminary schedule has been approved. Five State Business Days will be required for review and approval or rejection and return of the preliminary schedule.

(2) **Baseline CPM Schedule.** In accordance with the time frames listed below, the Contractor shall submit six copies of the Baseline CPM Schedule documents depicting the Contractor's work plan for the entire Contract.

Project Construction Cost ($ million)	Time Frame After Approval of Preliminary Schedule for Submission of the Baseline CPM Schedule (State Business Days)
< 5	10
5 - 15	15
15 - 40	20
> 40	30

The Contractor shall submit to the Engineer for review and approval or rejection and return:

(a) Computer generated tabular schedule and logic reports in accordance with 1.e. below.

(b) Time-scaled computer generated Layout Output in conformance with 1.f. below.

(c) A written narrative explaining the schedule and the Contractor's general approach for achieving Substantial Completion and the date of Completion as specified in Subsection 108.10 of these Special Provisions. Multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the Baseline CPM Schedule.

(d) Electronic version as specified in 1.a. (4) above.

c. CPM Schedule Requirements for the Baseline and Updates.

(1) The CPM schedule and updates shall contain the following:

(a) The order in which the Contractor proposes to prosecute the Work; the starting dates of the various work stages, operations, and principal items of work including procurement of materials and plant, and the contemplated dates for completing the same.

(b) List dates for all required submissions.

(c) A clear outline of the intended maintenance of traffic.

(d) The locations and timeframes for the installation of temporary and permanent soil erosion and sediment control measures to be installed.

(e) All unusual requirements specific to the project included in the Contract Documents or as deemed appropriate for the project.

(f) Special consideration to sensitive areas such as wetlands, floodplains, waterways, and parklands to ensure that appropriate staging and seasonal constraints are considered in order to maximize the effectiveness of the soil erosion and sediment controls.

(g) The time frames when work is restricted in sensitive areas as reflected in present and future permits as anticipated or known.

(h) Updates to reflect permit conditions if changed.

(i) Include a detailed, step-by-step outline of any clean-up operations regarding contaminated material.

(j) The work of the Contractor, subcontractors, suppliers, the Department, permitting agencies, utility companies, and all others that affect progress shall be shown and identified on the schedule by responsibility codes.

(k) Procurement activities shall be shown, including plans, permits, materials, individual working drawings, fabrication, and delivery of the material. Twenty State Business Days will be required for review and certification or rejection and return of fabrication working drawings. Thirty State Business Days will be required for review and approval or rejection and return of working drawings for items that were included as conceptual and the Contractor is required to complete final design plans. The time frames set forth in this paragraph are provided for scheduling purposes only. The Department reserves the right to enlarge such time periods for review by a reasonable amount of time where circumstances necessitate, within the sole discretion of the Engineer.

(l) Traffic staging, delivery of Department - furnished labor/equipment, project phasing, right-of-way availability dates, and any other requirements specified in Divisions 200 through 900 shall be shown.

(m) The CPM schedule shall contain sufficient activities to adequately depict the Work, and will be subject to the review and approval of the Engineer.

(n) The logic and activity time durations established by the Contractor shall be consistent with the Contract Documents and be reflective of proper coordination between trades.

(2) The CPM schedule shall operate as follows:

(a) The CPM schedule shall be of the precedence type.

(b) One activity for each discrete component part of each Pay Item scheduled in the Proposal. The Engineer may allow grouping of similar Pay Items into one activity. No work activity shall have a duration greater than 30 Calendar Days, except as approved by the Engineer. The activities shall be consistent with the Work Breakdown Structure (WBS), and shall also include discrete component parts of the Contractor's submittal preparation, Department approval, procurement, and construction work activities with sufficient detail such that all the relationships with all direct and non-direct parties to the Work are shown.

(c) The system shall be based upon network diagrams and accompanying mathematical tabulations as described hereinafter. Diagrams shall show the order and interdependence of activities and the sequence and quantities in which work is to be accomplished. The basic concept of network scheduling shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and how its completion may affect the start of subsequent activities. The critical path shall be distinguished from other paths on the network.

(d) The completion date of the CPM schedule shall be the date of Completion specified in Subsection 108.10 of these Special Provisions, except as specified in Subsection 108.04 subpart 5, which shall be input as a Finish Milestone with a Late Finish Constraint. All Intermediate Milestones required in the Contract shall be shown in proper logical sequence and input as a "Start-no-Earlier-Than" constraint for entrance into an area or start activity or a "Finish-no-Later-Than" constraint date for completions.

(e) Activities shall be described such that the Work is readily identifiable for assessment of start and completion, as well as intermediate status. Descriptions shall utilize activity codes for physical locations at each stage such as distance-markers, structures, and elevations where possible to define the Work. Activity descriptions of "Start," "Continue," "Completion," "X percent," "Y percent," "Z percent" or similar nonspecific descriptions will not be allowed.

(f) The CPM schedule shall be calculated in Working Days. The Working Day to calendar date correlation shall be based upon the Contractors proposed work week with adequate allowance for weekends, legal holidays and any special requirements of the Contract. Activities shall indicate the calendar being used. Durations for activities shall not be less than one workday. Multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the baseline schedule and subsequent updates.

(g) Constraint dates are permitted only on milestone activities, unless otherwise approved by the Engineer.

(h) All activities with the exception of the Project Start Milestone and Project Completion Milestone shall have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with a succeeding activity. Start-to-Finish relationships are not acceptable.

(i) CPM schedules, which have been resource leveled, are permissible, provided the effects of leveling are incorporated in the schedule using "Start-no-Earlier-Than" date constraints.

d. Computer Program Requirements. The computer program requirements shall be the same as that specified in Subsection 105.15 subpart 1.e. of these Special Provisions.

e. Tabular Reports.

(1) CPM schedule reports shall be provided for the following sort orders:
(a) Total float, then early start for activities with float less than 20 days.
(b) Grouped by responsibility, then by early start.
(c) Grouped by WBS, area, then sorted by early start.
(2) The minimum activity information required for each of the above reports in (1), shall include the following:
(a) A unique activity ID for each activity.
(b) A description of the Work represented by the activity.
(c) Location code identification.
(d) Work responsibility code identification.
(e) Original activity duration and remaining activity duration in Working Days.
(f) Early and late, start and finish dates calculated according to CPM principles.
(g) Total float.
(h) Historical (actual) dates for activities completed or underway shall replace the appropriate calculated dates.
(i) Stages.
(j) Calendar used for each activity.

f. CPM Time-Scaled Layout Output.

(1) The network displayed on the schedule diagram shall depict the exact detail of the CPM schedule reports.
(2) The network diagram shall be of the precedence type and drawn by using early dates.
(3) The layout output shall be time-scaled. The length of the activity representation shall be proportional to the activity duration.
(4) The activity display shall include the:
(a) Activity description.
(b) Activity identification.
(c) Activity original duration and remaining duration.
(d) Activities coded by area, responsibility, and WBS.
(e) Activity total float.
(f) Activities early start dates.
(g) Activities finish dates.
(5) The activities, which are displayed on the network diagram, shall be grouped by WBS and sorted by area. The title of these components shall appear on the left-hand side of the plot.
(6) The critical path shall be identified on the plot.
(7) Vertical lines indicating the start and the end of each month shall be shown.
(8) The data date shall be indicated on the plot in the activity display and in the title at the top or bottom of the plot.
(9) Completed activities shall be indicated on the plot.
(10) The Contract title shall be displayed on the plot.
(11) A legend shall be provided which indicates the various symbols used and their meanings.
(12) Milestone Activity shall be indicated by a prominent symbol.
(13) Different line types shall indicate the critical path and completed Milestone and activities.

g. Review and Approval. The Engineer will review a submitted preliminary schedule for approval or rejection within five State Business Days of receipt and will thereafter return same to the party having submitted it. There will, in turn, be allotted ten State Business Days for review and approval or rejection by the Engineer of the submitted baseline schedule, which will thereafter be returned to the party having submitted it. The Engineer will review revised preliminary or revised baseline submittals within five State Business Days of receipt. The time periods set forth in this paragraph are provided for scheduling purposes only. The Department reserves the right to enlarge such time periods for review by a reasonable amount of time where circumstances necessitate, within the sole discretion of the Engineer.

h. Updating and Revisions.

(1) Within ten State Business Days after review by the Engineer, all preliminary and baseline schedules that are not approved shall be revised and resubmitted by the Contractor until the Engineer's approval is received.

(2) The Contractor shall update the CPM schedule monthly whether or not the Engineer has accepted the schedule, to reflect actual activity progress. The update shall include the historical record of actual start and actual finish dates for activities in progress, or completed, and the remaining duration based on the amount of workdays required to complete the activity.

(3) Monthly progress meetings shall be held. The updated CPM schedule shall be the basis for the monthly progress review meetings. Activity progress shall be prepared in advance of the meeting. At this meeting, attended by the Engineer, all progress during the calendar month shall be presented and reviewed for incorporation into the schedule by the Contractor. Within a period of ten State Business Days from the date of this progress meeting, the Contractor shall submit the schedule update to the Engineer with the agreed upon changes.

(4) The monthly schedule update submission shall consist of three copies of electronic format on floppy diskettes or compact disks and three copies of the following:

(a) Updated CPM schedule reports (see Item e. above).

(b) Layout output. (See item f. above)

(c) CPM progress narrative.

The CPM progress narrative report submitted as part of the update analysis shall include, but not be limited to, the:

1. Description of schedule status.
2. Discussion of current and anticipated delaying problem areas and their estimated impact.
3. Schedule slippage, pay revisions, and/or progress along the critical path in terms of days ahead or behind the allowable dates, and if the Work is behind schedule, progress along other paths with negative float. This shall be in addition to and not a substitute for requirements in Subsection 108.11.
4. Logic changes and an explanation of the revisions. Revisions to activities not worked on during the period, including changes in duration, or revisions to activity relationships are to be considered logic revisions. Out-of-sequence activities are not acceptable and shall be corrected in logic revisions prior to submission to the Department.

(5) When, in the Engineer's opinion, the CPM schedule fails to reflect the Contractor's actual plan and method of operation, or the Contractor's completion date as indicated by the CPM is more than one month behind the Contract completion date, the Engineer may require the Contractor to submit for review within ten State Business Days, a recovery plan for completion of the remaining work within the Contract completion date. A recovery plan shall include, but not be limited to, a revised CPM schedule and additional manpower and equipment that shall be utilized to complete the project by the date of Completion.

(6) When the Contractor adds activities that are not Extra Work Items to the CPM schedule, they shall be added in a method that completion dates of any succeeding baseline activities are not affected. All revisions shall be submitted to the Engineer for approval before incorporation into the CPM schedule.

(7) The Engineer shall have the right, within its sole discretion, to prepare its own update(s) or revision(s) to the baseline schedule in the event of a dispute between the parties regarding the appropriateness of the submitted revision(s) or updates to the baseline schedule or by reason of a failure on the part of the contractor to prepare same, which update(s) or revision(s) may reflect what the Engineer has determined to be the actual status of the project progress, actual sequencing of the Work and appropriate scheduling logic required under this Subsection. The Engineer may thereupon rely on its own revision(s) or update(s) of the baseline schedule in the administration of the project, review of claims and/or the imposition of liquidated damages.

i. Changes and Delays. To ensure that the CPM schedule continues to accurately reflect the Contractor's plan for the Work and that it incorporates the impact of all changes and delays as soon as the Work scope can be defined, the Contractor shall use the following procedure to incorporate changes and delays.

When Extra Work or a change is proposed or claimed, the Contractor shall submit a Time Impact Evaluation form. Each Time Impact Evaluation must identify in a CPM fragnet sketch, additional work required as a result of the proposal and its interrelationship to the CPM schedule. Each change or delay

shall be represented by adding a new activity or activities. These activities shall be clearly identified. This sketch shall show all activities, logic revisions, duration changes, and new activities with all the predecessors and successors. The Time Impact Evaluation form shall also include any associated cost changes for performing the Work in question. Upon the Engineer's approval of the Time Impact Evaluation, the Contractor shall incorporate the fragnet's illustrating the influence of changes and delays into the baseline schedule and the working schedule in the next schedule update. An extension of time may only be considered when the Time Impacted scheduled completion date exceeds the date of Completion. For cases where the Contractor is behind schedule, an extension will be granted for only the amount of time that the Department is responsible as supported by a Time Impact Evaluation. In the event of a dispute, the Engineer may prepare an update, which is believed to be the true impact on the project. No additional compensation will be paid to the Contractor for preparing these revisions. Any request for extension of time shall be verified by CPM analysis and shall be in accordance with Subsection 108.11. Compensation for additional expense to the Contractor and allowance of additional time for completion of the Work shall be as set forth in a Construction Order in accordance with Subsections 108.11 and 109.03.

2. Staging. The Contractor shall schedule the Work using such procedures and staging as may be specified in the Contract Documents. Work designated as part of separate stages may be performed simultaneously where provided by the Contract Documents or where approved.

When the Contract Documents provide for staging or specific procedures, the Contractor may present, for written approval of the Engineer, a detailed, written alternate staging plan or procedure which incorporates the requirements of the Department. If the Contractor proposes an alternate-staging plan, two CPM schedules shall be submitted. One based on the original staging and one based on the Contractor's alternate staging. As a condition of the Engineer's reviewing of the alternate staging plan or procedure, the Contractor agrees that it is not entitled to additional Contract Time or compensation arising from possible delays to construction due to the time spent in reviewing the Contractor's staging plan or procedure, regardless of whether the Department accepts or rejects it. The Engineer will review and approve or reject and or return, with comments, the staging plan within ten State Business Days. If such staging plan or alternate procedure is approved in writing, the Contractor shall then finalize the progress schedule consistent with the alternate approved staging.

3. Prosecution of the Work.

a. At or prior to the preconstruction conference, the Contractor shall furnish the name and location of the solid waste facilities to be utilized as well as the fee structure of each of the facilities. Failure to provide such information shall make the Contractor ineligible for adjusted compensation as provided for in Subsection 104.07.

b. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the Completion of the Project in accordance with the Contract Documents and within the time set forth under Subsection 108.10.

c. The Contractor shall supply the Engineer with a weekly work schedule indicating the Contractor's planned work, the subcontractor's planned work, the dates when materials and submissions are to be delivered, and a forecast of lane closings.

d. The Contractor shall notify the Engineer, in writing, prior to discontinuing work for any reason and at least 24 hours in advance of resuming operations.

e. The Contractor shall arrange and prosecute the Work so that each successive construction operation at each location shall follow the preceding operation as closely as the requirements of the various types of construction permit.

f. Underground structures for traffic signals, except for pressure detector installations shall be constructed prior to completion of the intersecting road.

g. Work, which closes or alters the use of existing roadways shall not be undertaken until adequate provisions, conforming to the requirements of Section 617, have been made by the Contractor and approved.

h. The Engineer may revise stage construction and maintenance of traffic, if deemed necessary, by the Engineer due to unforeseen circumstances that may arise during construction.

i. When possible, the construction of subsurface structures adjacent to traffic shall be performed while traffic is being diverted from such areas. If traffic must be maintained in such areas, the Work shall be done expeditiously in stages, as approved, and with minimum interference with traffic.

j. Subsurface structure excavation adjacent to traffic shall not remain open overnight unless adequately protected by approved safety devices.

k. The Contractor shall proceed with the Work of demolition of the various buildings that are identified with a demolition number as and when they become available for demolition. If any of the buildings to be demolished is not available for demolition at the time the Contractor begins work on the Project, the Contractor shall temporarily defer its work in the vicinity of the building and complete the Work when the building is made available for demolition.

l. Operations adjacent to traffic shall be confined to only one side of the traffic at any one time unless otherwise specified in the Contract Documents.

m. Concrete curbs constructed adjacent to flexible base and surface courses shall be completed, cured, and backfilled before the flexible base and surface courses are constructed.

n. Bituminous paving operations shall be staged to progress up to the bottom of the surface course. The top layer of the bituminous concrete surface course for the full width of the traveled way, shoulder, and auxiliary lanes shall be paved as a single stage of construction and as the final paving operation.

4. Acceleration and Default. If, in the opinion of the Engineer, the Contractor falls behind its baseline schedule, and cannot complete the Work within the time prescribed under Subsection 108.10, as modified pursuant to Subsection 108.11, the Contractor shall take such steps as may be necessary to improve its progress. The Engineer may require the Contractor to increase the number of shifts, begin overtime operations, work extra days including weekends and holidays, or supplement its construction plant and to submit for approval such supplementary schedule or schedules, as may be deemed necessary to demonstrate the manner in which the agreed rate of progress shall be regained, all at no cost to the State.

Failure of the Contractor to comply with the requirements of the Engineer under this Subheading is grounds for the determination that the Contractor is not prosecuting the Work with such diligence as to ensure Completion within the time specified. Upon such determination, the Engineer may terminate the Contractor's right to proceed with the Work or any separate part thereof in accordance with Subsection 108.17.

5. Intent, Responsibility, and Time. Scheduling of construction shall be the responsibility of the Contractor. The Contractor's shall determine the most feasible order of work commensurate with the Contractor's abilities and the Contract Documents. The CPM schedule will be used for determining extensions or reductions of Contract Time pursuant to Subsection 108.11.

It is not intended that the Engineer, by approving the CPM schedule, agrees that it is reasonable in any or all respects or that following the CPM schedule can result in timely completion of the Project. The progress schedule is not a part of the Contract.

If, in the preparation of the CPM schedule, the Contractor reflects a completion date different than that specified under Subsection 108.10, this in no way voids the date set therein. The date as specified in that Subsection governs. Where the CPM schedule reflects a completion date earlier than that specified as the Contract Time, the Engineer may approve such schedule with the Contractor specifically understanding that no claim for additional Contract Time or compensation shall be brought against the State as the result of failure to complete the Work by the earlier date shown on the CPM schedule.

6. Payment. Payment for the accepted progress schedule will be made on a lump sum basis for the costs for schedule preparation, maintenance, updating, facilities, personnel, computer hardware and software requirements, schedule submittals and reproduction as specified. Twenty-five percent of the lump sum bid will be paid upon approval of the baseline submission, and the balance paid on approval of updates at a prorated sum based upon the number of anticipated updates to be submitted during the Contract Time.

Payment will be made under:

Pay Item	*Pay Unit*
PROGRESS SCHEDULE	LUMP SUM

108.05 Mobilization.

THE ENTIRE SUBSECTION IS CHANGED TO:

Mobilization shall consist of the preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the Project site, and other work performed or costs incurred prior to beginning Work.

Payment for mobilization will be made on a lump sum basis regardless of the fact that the Contractor may have, for any reason, shut down its work on the Project or moved equipment away from the Project and back again.

Payment will be made in accordance with the following schedule:

1. When five percent of the Work is completed and the Baseline Progress Schedule is approved by the Engineer, 25 percent of the lump sum bid for mobilization or 2.5 percent of the Total Contract Price, whichever is less, will be paid.
2. When ten percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 50 percent of the lump sum bid for mobilization or five percent of the Total Contract Price, whichever is less, will be paid.
3. When 15 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 75 percent of the lump sum bid for mobilization or 7.5 percent of the Total Contract Price, whichever is less, will be paid.
4. When 20 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 100 percent of the lump sum bid for mobilization or ten percent of the Total Contract Price, whichever is less, will be paid.
5. When all Work on the Project is complete, payment for the lump sum bid for mobilization in excess of ten percent of the Total Contract Price will be made.
6. The percentage of Work completed shall be the total of payments earned compared to the Total Contract Price. The total of payments earned excludes the amount paid for this item and the amount paid for materials furnished but not incorporated into the Work in accordance with Subsection 109.06, as shown on the monthly estimates of the approximate quantities of Work performed, prepared in accordance with Subsection 109.05.
7. No payment will be made for mobilization until a Baseline Schedule is approved, except when all Work on the Project is complete, then 50 percent of the lump sum bid for mobilization will be paid and no further payment(s) will be made for the lump sum bid for mobilization.

Payment will be made under:

Pay Item	*Pay Unit*
MOBILIZATION	LUMP SUM

When mobilization is not a Pay Item, all costs for the Work shall be included in the prices bid for various Pay Items scheduled in the Proposal.

108.10 Time of Completion.

A. All work required for Substantial Completion of the Project shall be completed on or before _____.

B. The entire Work of the Project shall be completed on or before _____.

A. All work required for Substantial Completion of the Project shall be completed in _____ Working Days.

B. The entire Work of the Project shall be completed in _____ Working Days.

A. All work required for Substantial Completion of the Project shall be completed in _____ Calendar Days.

B. The entire Work of the Project shall be completed in _____ Calendar Days.

108.11 Extensions and Reductions of Contract Time.

THE ENTIRE TEXT IS CHANGED TO:

A. Basis for Adjustment. Extensions or reductions to the Contract Time may be provided by Construction Order, however, such extensions or reductions will be allowed only to the extent that the increase or decrease in the Work or delays of the types indicated below affect the Critical Path of the current approved Progress Schedule update and the Completion of the Work and/or Substantial Completion Dates provided in Subsection 108.10. However, when the Finish Milestone(s) for the Substantial Completion Date or Completion of the Work Date identified on the current approved schedule is a date or dates prior in time to the dates specified in the Contract, the Department will consider the time between the dates projected in the schedule and that in the Contract as constituting float in the schedule which shall offset the amount of allowable delay contributable to the actions of the Department, third parties, or the Contractor, or caused by a combination of those factors, and other factors beyond the control of the Contractor as determined by the Department which ever first occurs.

An extension will also provide only for those Working Days adversely impacted where operations were on an approved schedule, including all shifts of Work. No extension can be requested unless all submittals and approvals have been completed as specified in Subsection 108.04.

The Contractor may be granted an extension of Contract Time and not be assessed liquidated damages for any portion of the delay beyond the Completion of the Work and/or Substantial Completion Dates as specified in Subsection 108.10 caused by reasons beyond the control and without the fault or negligence of the Contractor, and subject to all due diligence by the Contractor to avoid and mitigate the delay. Reasons may include, but are not restricted to, those provided for in the Specifications and the following:

1. acts of civil or military authorities, terrorism, war, or riot;
2. fire;
3. floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, sustained severe winds exceeding 75 mph, or other cataclysmic natural phenomenon (except on working day contracts);
4. Extreme Weather Conditions (subject to Item 1 of subpart B) (except on working day contracts);
5. epidemics or quarantine restrictions;
6. strikes or labor disputes beyond the control of the Contractor that prevent work on the construction operations that are critical to the completion of the Project;
7. shortages of materials (subject to Item 2 of subpart B) or freight embargoes;
8. acts of the State in its sovereign capacity;
9. court orders or injunctions;
10. discovery of Regulated Hazardous Waste;
11. acts by others consistent with Subsections 105.10 and 107.09;
12. failure of the Engineer to furnish interpretations of the Contract Documents (subject to Item 3 of subpart B).

Unless specifically provided for in the Specifications or where the delay is caused by the negligence, bad faith, active interference, or other tortuous conduct of the Department or its employees, the Contractor shall not make any claim for damages or Additional Compensation for any delay, and agrees that any such delay shall be fully compensated for by an extension of Contract Time if granted. In such a case where the delay is shown by the Contractor to have been caused by such tortuous conduct of the Department or its employees, the Contractor's remedy for Additional Compensation shall be as specified in Subsection 109.04. Negligence of consultants, other contractors, Utility(s), other public entities or any other person or entity, shall not be imputed to the Department. The Contractor shall not be entitled to Additional Compensation or an extension of Contract Time for any delay contemplated or that which should have been contemplated by the Contractor at the time the Contract was awarded.

Extensions of Contract Time will not be granted due to delays caused by, or in any way related to, the financial condition of the Contractor, subcontractors, sub-subcontractors, material, personnel, fabricators, or suppliers. The Contractor and its surety assume full responsibility for ensuring that the financial condition of any of the above does not delay completion of the Contract.

If the Work required is reduced or altered so that the time required for Completion is reduced, the Department may reduce the Contract Time as specified in Subsection 108.10. The Engineer will evaluate the facts and the extent of the reduction. The Department's findings thereon will be final and conclusive.

The Contractor or surety is not relieved of liability for liquidated damages for any period of delay in completion in excess of that expressly provided for in this Subsection.

B. Requests for Extensions. Request for extension of Contract Time will not be evaluated or granted unless they meet the provisions of A. above and the Contractor has notified the Resident Engineer in writing of the causes of delay within 15 State Business Days from the beginning of any such delay on forms provided by the Department. The effect of the delay on the Progress Schedule shall be documented by the Contractor as specified in Subsection 108.04. The Department will evaluate the facts and the extent of the delay, and the Department's findings will be final and conclusive. Request for extensions shall also be based on the following:

1. If the Contractor submits daily documentation of such conditions, Extensions of Contract Time for Extreme Weather Conditions may be granted according to the following:
   a. The specified completion dates anticipate that the number of total Working Days available for Construction Operations, subject to the requirements of the Contract Documents, during the period of April through November inclusive is at least 145 for road and bridge work.
   b. The specified completion dates anticipate that the number of total Working Days available for Construction Operations, subject to the requirements of the Contract Documents, during the four month winter period of December through March inclusive is ____for road work.

c. When the actual number of Working Days available for Construction Operations is less than the anticipated number provided for in the Special Provisions, an extension of one day for each day less may be allowed.

2. Extensions of Contract Time will not be granted for a delay caused by a shortage of materials unless the Contractor furnishes the following:
   a. Documentary proof that it has diligently made every effort to obtain such materials from all known sources within reasonable distance from the Work.
   b. Proof that the inability to obtain such materials when originally planned, could not be compensated for by revising the sequence of the Contractor's operations. The term "shortage of materials" applies only to raw and fabricated materials, articles, parts, or equipment which are standard items and does not apply to materials, parts, articles, or equipment which are processed, made, constructed, fabricated, or manufactured to meet the specific requirements of the Contract. Only the physical shortage of materials and not the cost of materials will be considered.
3. Extensions of Contract Time will not be granted for failure of the Engineer to furnish interpretations of the Contract Documents unless such request for an interpretation of the Contract Documents is reasonable and made in good faith, and the failure to respond was palpably unwarranted and was furnished more than 20 State Business Days after the written request was received by the Resident Engineer.
4. Extension of Contract Time for utility work delays will only be granted when the Utility does not complete their work within an additional 30% of the estimated durations for the Utility as specified in Subsection 105.09. A day for day extension will be allowed for each day extended beyond the 30% time that the Critical Path is affected.

108.12 Right-Of-Way Delays.

THE TITLE OF THIS SUBSECTION IS CHANGED TO:

108.12 Right-Of-Way Information and Delays.

THE FOLLOWING IS ADDED:

The Contractor shall obtain from the Engineer all information regarding ROW Parcels and Easements acquired for the Project as well as the nature and type of title acquired. The Contractor shall make periodic requests for updates to this information during the course of the Contract.

The Contractor shall not enter an Easement until the Resident Engineer provides written notice to the property owner. The Contractor shall provide written notice to the Resident Engineer, 30 calendar days prior to entering a particular Easement or right, which is lesser than a fee interest. The Contractor shall make no claim for delays by reason that entry upon an Easement or right which is lesser than a fee interest is conditioned upon notice or is limited in duration; the Contractor is required to schedule accordingly and take such limitations into account when planning performance of the Work.

Temporary Easements and/or temporary construction rights will in most cases contain a limitation as to the length of time that they are extant. The Contractor shall schedule the Work pursuant to Subsection 108.04 so as to accommodate the particular time limitations of an Easement or right which is lesser than a fee interest as reflected on the R.O.W. plans. The Contractor shall provide a written request to the Engineer that the Department procure an extension from the owner of a particular temporary easement or right, which is lesser than a fee simple interest, so as to enable the Contractor to continue occupancy of or re-enter same in the future, beyond the initial time period set forth in the respective property description prior to the expiration thereof.

Where the Contractor fails to complete the work within an area of a temporary easement or right lesser than a fee interest during the time allowed under the property description, by reason of the Contractor’s own fault; the Contractor shall reimburse the State for the sum payable to the owner of the underlying fee interest for the extended period of occupancy use. The Resident Engineer may deduct an amount equal to such payments from the monthly estimate of the Work performed after providing 30 day written notice to the Contractor of such action, including a breakdown of the costs sought or to be sought by reason of the delay in timely vacating a temporary easement or right lesser than a fee interest.

The following is a list of all rights-of-way that have not been secured and their approximate anticipated dates of availability:

Properties and Vacation/Availability Dates

Demolition and/ or Parcel No.	Approximate Baseline Station	Offset/Direction	Date

108.16 Failure to Complete on Time.
THE SUBSECTION HEADING AND TEXT ARE CHANGED TO:

108.16 Liquidated Damages and Incentive Payments For Early Completion.

A. Liquidated Damages. The Contractor and the Department recognize that delay in Completion results in damages to the State in terms of the effect of the delay on the use of the Project, upon the public convenience and economic development of the State, and also results in additional costs to the State for engineering, inspection, and administration of the Contract. Because it is difficult or impossible to accurately estimate the damages incurred; therefore, the parties agree that if the Contractor fails to complete the Contract within the time stated in these Special Provisions, or within such further time as may have been granted in according to the provisions of the Contract, the Contractor shall pay the State liquidated damages according to those provided in the Special Provisions. Such liquidated damages shall be paid for each and every day, as hereinafter defined, that the Contractor is in default to complete the Contract.

Liquidated damages shall be as follows:

1. For each Calendar Day that the Contractor fails to complete the Work as specified in Subpart A of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Contractor shall pay liquidated damages consisting of Road User Costs and Construction Engineering Costs to the State in the amount of $_____.
2. For each Calendar Day that the Contractor fails to complete the entire Work of the Project as specified in Subpart B of Subsection 108.10 of these Special Provisions, for Completion of the Work, the Contractor shall pay liquidated damages consisting of Construction Engineering Costs to the State in the amount of $_____, provided that the Work as specified for Substantial Completion is actually completed.

1. For each Working Day that the Contractor fails to complete the Work as specified in Subpart A of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Contractor shall pay liquidated damages consisting of Road User Costs and Construction Engineering Costs to the State in the amount of $_____.
2. For each Working Day that the Contractor fails to complete the entire Work of the Project as specified in Subpart B of Subsection 108.10 of these Special Provisions, for Completion of the Work, the Contractor shall pay liquidated damages consisting of Construction Engineering Costs to the State in the amount of $_____, provided that the Work as specified for Substantial Completion is actually completed.

The Department will recover all liquidated damages specified above by deducting the amount thereof from any monies due or that may become due the Contractor, or from the Contractor or from its surety on this or any other contract being performed for the Department.

B. Incentive Payment for Early Completion. As provided for in the Special Provisions.

No Incentive Payment for Early Completion is specified for this project

108.19 Lane Occupancy Charges.
THE SECOND PARAGRAPH IS CHANGED TO:

Except as specifically excluded in the Special Provisions, a Lane Occupancy Charge will be collected by deducting the appropriate charge, calculated according to this Subsection, from the monthly estimate, whenever a lane or lanes are not promptly made available to the traveling public during the lane closure limits for the following reasons: equipment

breakdowns; non-extreme weather related causes; late start of work; shortage of labor, materials, fuel, machinery or equipment or by reason of the Contractor's negligence or fault or that of its workers, employees, subcontractors or suppliers. This charge will be collected for that period of time each lane is unavailable to the traveling public beyond the lane closure limits. This charge will be calculated by multiplying the length of time of the delayed opening, in minutes, by the rate of $10 per minute per lane, unless otherwise set forth in the Special Provisions.

THE THIRD PARAGRAPH IS CHANGED TO:

The total amount of the Lane Occupancy Charge collected from a Contractor shall not exceed $10,000.00 per day.

THE FOURTH PARAGRAPH IS CHANGED TO:

The Resident Engineer will keep record of each occurrence as well as the cumulative amount of time that a lane is kept closed beyond the lane closure limits. After each occurrence the Contractor will be notified. For every three such occurrences, one day will be deducted from the Substantial Completion date or days. For every 60 minutes of lane closures recorded beyond the lane closure limits, one additional day will be deducted from the Substantial Completion date or days. The Substantial Completion date or days will be re-established. The Contractor will be notified of such action, and the Contractor shall not make any claim against the Department as a result of such action. The Resident Engineer also reserves the right to suspend all Work until the next allowable lane closure time period, where the Contractor exceeds the lane closure limits. Before deduction of any charge from a monthly estimate for occupancy of a lane beyond the allowable lane closure hours, the Department will provide the Contractor with a statement of the charges to be collected and the supporting calculations.

THE FOLLOWING IS ADDED:

The rate or rates to be applied in the calculation of a Lane Occupancy Charge shall be in accordance with the following:

Description	Rate per Minute

SECTION 109 – MEASUREMENT AND PAYMENT

109.02 Scope of Payment.

THE SECOND PARAGRAPH IS CHANGED TO:

The "Basis of Payment" clause in the Specifications relating to any Pay Item in the proposal encompasses all compensation for Work to complete that Pay Item and no other Pay Item. All elements of the Work related to that Pay Item will not be measured or paid for under any other Pay Item in the Contract Documents unless it is stated in the "Basis of Payment" clause for that Pay Item that a portion of the Work will be paid for under another Section or Subsection of the Specifications.

109.03 Force Account Payment.

THE FIRST, SECOND, THIRD, AND FOURTH PARAGRAPH ARE CHANGED TO:

When the Department has directed the Contractor to do Work on a Force Account basis it will be compensated as specified in this Subsection.

The total direct costs for labor, materials, equipment, bonds, insurance, and tax as provided below, together with applicable markups constitute full compensation for all direct and indirect costs (including overhead and profit), and are deemed to include all items of expense not specifically designated. Any adjustments to Performance Bond and Payment Bond will be made as specified in Subsection 103.05. Force Account payments will be adjusted for those costs incurred determined to be the fault of the Contractor. The Force Account payment will be further adjusted where the Contractor's prices in its Proposal for any affected original items of work did not properly include all the costs to complete the affected work as originally provided in the Contract Documents.

When Work that is paid on a Force Account basis is performed by forces other than the Contractor's organization, the Contractor shall reach an agreement with such other forces as to the distribution of payments made by the State for such Work, with a copy of all such completely executed agreements to the Resident Engineer. Additional payment will

not be made for any reason due to the performance of the Work by a subcontractor or other forces, or for costs outside that covered by the agreement.

It is understood that a Contractor's remedy for Additional Compensation for Extra Work or for any other reason as specified in these Specifications, when an action is brought before the Superior Court as specified in the Contractual Liability Act, NJSA 59:12-1 et seq., shall not exceed the amount that would be specified in these provisions had a Force Account been carried out. However, damages sought by the Contractor in a court proceeding shall be limited to actual additional costs incurred by the Contractor resulting directly from the Extra Work or by other reason specifically permitted under the terms of the Specifications as specified in the Contractual Liability Act. As a condition predicate to seeking Additional Compensation under the claims process or in the Superior Court, the Contractor shall have the burden of proof to demonstrate compliance with the requirements of this Subsection and other applicable Subsections, and shall have kept all records required under this Subsection even if the Department has not directed that the Contractor do such Work on a Force Account basis.

Force Account payment will be limited to the following:

1. Labor.

THE FIRST PARAGRAPH IS CHANGED TO:

For all necessary direct 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.

For specific extraordinary operations the Department may allow supervising or other special type employees to be considered direct labor, but only that time in direct labor or direct charge to complete the specific construction operations.

2. Bond, Insurance, and Tax.

THE ENTIRE TEXT IS CHANGED TO:

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. For payment, the Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.

Payment for Performance Bond and Payment Bond adjustments will be as specified in Subsection 103.05.

4. Equipment and Plant.

a. Contractor Owned Equipment and Plant.

THE SECOND AND THIRD PARAGRAPH ARE CHANGED TO:

The Blue Book will be used in the following manner:

(1) The estimated "rental" hourly rate will be determined by dividing the monthly rate by 176 and then applying a 20% reduction factor. The weekly, hourly, and daily rates will not be used.

(2) The estimated operating costs per hour will be the Blue Book rates.

(3) The number of hours to be paid for will be the number of hours that the equipment or plant is actually used on a specific Force Account activity each day, as presented in Daily Equipment Work Sheets, received from the Contractor and verified by the Department.

(4) 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 next six months of the period the Force Account work is being performed. The rates will be adjusted for each six-month period thereafter.

(5) Area adjustment will not be made. Equipment life adjustment will be made in according to the rate adjustment tables.

(6) Overtime shall be charged at the same rate indicated in Item (1) and (2) above.

(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 Item (1) above and will be limited to the total hours worked for any Force Account activity on that particular day.

(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 to, on, and away from the site, and all incidentals.

(9) Operator costs will be paid only as provided in Subheading 1 above.

All equipment shall, in the opinion of the Department, be in good operating condition. The State will not provide payment of any type for equipment that is determined to be unsuitable by the Department for the Force Account Work or that is inoperable during periods of breakdown or repair. 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 equipment actually used and the suitable equipment paid for will be made a part of the record for Force Account work. 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 will be that for the suitable equipment.

b. Rented Equipment and Plant.

THE ENTIRE TEXT IS CHANGED TO:

In the event that the Contractor does not own a specific type of equipment or plant 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 for the equipment as specified in the rental agreements 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 to, on, and away from the Project site. The Contractor shall provide the Resident Engineer a copy of the fully executed rental agreement, and a paid receipt or canceled check for the rental expense incurred.

If the rental agreement does not cover operating costs, the Contractor shall be entitled to the rate established in Subheading 4.a. above for each hour that piece of rental equipment is actually operational.

The State will not provide payment of any cost incurred due to equipment that is determined to be unsuitable by the Department for the Force Account Work or that is inoperable during periods of breakdown or repair.

5. Profit.

THE ENTIRE TEXT IS CHANGED TO:

Profit shall be computed at ten percent of the following:

a. Total material cost excluding transportation, shipping & handling.
b. Total direct labor cost (actual hours worked multiplied by the regular hourly rate).
c. Total fringe benefits on total direct labor cost as computed above.

6. Overhead.

THE ENTIRE TEXT IS CHANGED TO:

Any and all overhead for the Contractor is defined to include the following:

a. All salaries and expenses of executive officers, supervising officers, or supervising employees, except as provided for under Subheading 1 above;
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.

Any and all overhead costs of the Contractor for Force Account work shall be computed at 15 percent of the following:

a. Total material cost excluding transportation, shipping & handling.
b. Total direct labor cost (actual hours worked multiplied by the regular hourly rate), except for the direct labor cost of any supervisory or special employees allowed under Subheading 1. above.
c. Specific extraordinary overhead expenses, required specifically for the Force Account, may be allowed if approved by the Department prior to incurring any cost. In such instances, the Contractor will be paid only the reasonable costs of such extraordinary overhead expenses.
d. Total fringe benefits on total direct labor cost as computed above.

The Contractor will be allowed an additional five percent for overhead on the total amount of all work performed by the subcontractors.

THE FOLLOWING IS ADDED:

8. Responsibility.

Where work is performed under a Force Account, responsibility of such work shall remain that of the Contractor. The Department will determine if the Work is eligible for payment.

109.04 Payment for Contractor's Expenses During Delays.

THE FIRST PARAGRAPH IS CHANGED TO:

When the Department has approved an adjustment for Additional Compensation due to a delay, the Contractor will be paid its expenses during that period of delay by Change Order in the following manner:

2. Bond, Insurance, and Tax.

THE ENTIRE TEXT IS CHANGED TO:

For bond premiums; property damage, liability, and, workers compensation insurance premiums; unemployment insurance contributions; and social security taxes during the period of delay, the Contractor is to receive the actual incremental cost thereof, necessarily and directly resulting from the delay. For payment, the Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.

Payment for Performance Bond and Payment Bond adjustments will be as provided in Subsection 103.05.

3. Equipment.

THE FIRST PARAGRAPH IS CHANGED TO:

For any idle machinery or special equipment other than small tools which must remain on the Project site, with approval of the Department, during delays of specific operations, the Contractor is to receive compensation at one-half the rate calculated pursuant to Subheading 4 of the fifth paragraph of Subsection 109.03. Should the Department determine that it is not 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.

4. Miscellaneous.

THE SUBPART HEADING IS CHANGED TO:

4. Overhead.

6. Records.

THE SECOND AND THIRD PARAGRAPH ARE CHANGED TO:

The Department's records will be compared with completed daily reports furnished by the Contractor and any necessary adjustments will be made. When these daily reports are agreed upon and signed by both parties, said reports 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 the Department during the life of the Contract and for a period of not less than three years after Acceptance thereof, and the Contractor shall retain such records for that period. Where payment for equipment or labor is based on the cost thereof to forces other than the Contractor, the Contractor shall make every reasonable effort to ensure that the cost records of such other forces are open to inspection and audit by

the Department on the same terms and conditions as the cost records of the Contractor. Payment for such cost may be deleted if the records of such third parties are not made available to the Department. If an audit is to be commenced more than 60 days after Acceptance, 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 so 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 therefore has already been made, the Contractor shall refund to the Department the amount so disallowed.

109.05 Partial Payments.

SUBPART 1 OF THE SECOND PARAGRAPH IS CHANGED TO:

1. Each subcontractor or supplier has been paid any amount due from any previous progress payment and shall be paid any amount due from the current progress payment and no retainage is being withheld from any subcontractor on federally funded projects; or

THE SEVENTH PARAGRAPH IS CHANGED TO:

From the total amounts ascertained as payable, excluding subcontracted work on federally funded projects, an amount equivalent to two percent of the amount due on the total adjusted Contract price will be deducted and retained pending Substantial Completion. Any amounts paid to the Contractor in the form of incentive payments for early Completion and positive pay adjustments will not be included in the adjusted Contract price when calculating retainage.

109.06 Materials Payments.

THE SUBSECTION HEADING IS CHANGED TO:

109.06 Materials Payments and Storage.

THE FIRST PARAGRAPH IS CHANGED TO:

The monthly estimates and payments made on account thereof may also include, when authorized by the Department, an amount equal to the actual cost of materials furnished but not incorporated into the Work, provided, however, that such amount does not exceed 85 percent of the Contract price for the Pay Item into which the material is to be incorporated, and the quantity allowed does not exceed the corresponding quantity estimated in the Contract Documents. Advance payment will only be for that portion of the price in the Proposal related to the materials and any costs for storage at the facility of manufacture. Any taxes levied by any government against the materials shall be borne by the Contractor. Before including payments for such materials in an estimate, the Department must be satisfied that:

1. The materials have been properly stored and protected along or upon the Project site or have been stored and protected at locations owned or leased by the Contractor or the Department within the State, except that structural steel, prestressed concrete beams, and other large items not suitable for storage on or near the site, may be stored outside the State with the approval of the Department; and
2. The materials have been inspected and appear to be acceptable based upon available supplier's certification and/or materials test reports; and
3. The Contractor has provided the Resident Engineer with an paid invoice or paid bill of sale for the materials and a fully executed Department form "Release of Liens for Materials Stored for Incorporation in Department of Transportation Project" including the transfer of ownership to the Department; and
4. The materials are clearly identified in large letters as being without encumbrances and for use solely on the Project, and if stored on property not belonging to the State or at the facility of manufacture, are fenced in with access limited to the State and the Contractor; and
5. When such materials are stored in a leased area, the lease is made out to the Contractor and provides that it shall be canceled only with the written permission of the Department.

THE FOURTH PARAGRAPH IS DELETED:

109.07 Payment Following Substantial Completion.

THE FOURTH PARAGRAPH IS CHANGED TO:

In the first estimate following Substantial Completion, the Department will reduce retainage to one percent of the total adjusted Contract price excluding subcontracted work on federally funded projects, unless it has been determined by the

Commissioner that the public interest requires the withholding of additional retainage. If retainage is held in cash withholdings, the reduction is to be accomplished by payment under the next partial payment. If retainage is held in bonds, the Department will authorize a reduction in the escrow account.

THE LAST PARAGRAPH IS CHANGED TO:

All monies retained subsequent to the first estimate following Substantial Completion may be released as specified in Subsection 109.11.

109.09 Payment Following Acceptance.
THE ENTIRE SUBSECTION IS CHANGED TO:

All Partial payments by monthly estimate will be processed prior to acceptance. Final payment will be made as specified in Subsection 109.11.

109.10 As-Built Quantities.
THE FIRST AND SECOND SENTENCE OF THE SECOND PARAGRAPH ARE CHANGED TO:

The Resident Engineer may from time to time, before Substantial Completion, prepare as-built quantities and incorporate these quantities into monthly estimate certificates through an appropriate Field Order or Change Order. Such interim as-built quantities are subject to recalculation in completion of the Final Certificate.

THE THIRD PARAGRAPH IS DELETED.

109.11 Final Payment and Claims.
THE ENTIRE SUBSECTION IS CHANGED TO:

1. **Final Certificate.** All prior estimates and payments made by the Department are subject to correction in the Final Certificate, which will be completed as follows:
    a. After Acceptance is completed as specified in Subsection 105.23 and the As-Built quantities finalized, the Department will make an estimate of the total amount of Work done under the Contract, and prepare and issue the Final Certificate to the Contractor.
    b. Within 30 State Business Days after said Final Certificate has been issued to the Contractor, the Contractor shall submit to the Department either a written acceptance of the Final Certificate without exception together with an executed release in the form provided with the Final Certificate or a written acceptance of the Final Certificate with a reservation of specific claims, but otherwise releasing all claims not specifically reserved, by executing a conditional release in the form provided with the Final Certificate. The Contractor's failure to submit any written acceptance or acceptance with reservation within said 30 days will be construed by the Department as an acceptance by the Contractor of the Final Certificate without exception or reservation of Claims.
    c. Upon receipt of the Contractor's written acceptance of the Final Certificate with unconditional or conditional release, or when the Contractor fails to provide any written acceptance of the Final Certificate within 30 State Business Days of issuance, the Department will pay the entire sum due thereunder as provided by the New Jersey Prompt Payment Act NJSA 52:32-32 *et seq.*, provided the Final Certificate indicates a payment is due the Contractor. However, where the Final Certificate indicates a Credit (payment) is due the Department, the Contractor shall remit said Credit (payment) to the Department in the amount set forth in the Final Certificate.
    d. If the Contractor fails to remit the Credit (payment) due the Department, as indicated on the Final Certificate, within 30 State Business Days of issuance of the Final Certificate, the Department may pursue all legal means available to recover the amount due the State, including but not limited to, deducting the amount from payment due the Contractor on this or other Department Contracts or from retainage and/or the sale of bonds held in lieu of retainage for the Contract or for other Contracts, even where the credit is being contested by the Contractor.

    Neither the failure of the Contractor to accept the tendered Final Payment nor the failure of the Contractor to remit the credit (payment) due the Department shall affect when the "Completion of the Contract" shall be deemed to have occurred for any reason. Where there is a remaining monetary balance due

to the Contractor by the Department, Final Payment will be made after the "Completion of the Contract". Retainage shall be released to the Contractor upon completion of the contract unless a credit (payment) is due to the Department, which shall be deducted or adjusted in accord with the Specifications.

2. Conditions for Claims. Conditional acceptance of the Final Certificate will be permitted only where all of the following are met:

a. When the Contractor submits a Release conditioned with exception or reservation, the release shall state the specific monetary amounts and category of the claims being reserved. The Contractor acknowledges, by the act of executing the contract, that the failure to state specific monetary amounts and specific categories shall result in a waiver of such claims lacking as to amounts or specific categories thereof. The Contractor may reserve only those claims properly filed with the Department pursuant to Subsection 107.02 and not previously resolved. The Contractor waives all claims for which the required notice has not been filed with the Department.

b. The Contractor further understands and agrees, by the act of executing the Contract that neither the procedures established under this Subsection nor the review of claims by the Department pursuant hereto shall in any way modify the requirements applicable to the filing of a Contractual Notice Form or the filing of a suit pursuant to the provisions of N.J.S.A. 59:13-1 *et seq*. .

c. If the Contractor conditions its acceptance of the Final Certificate by reserving particular claims, the Contractor shall at the same time state in writing whether it would like to submit its reserved claims for review by the Department Claims Committee. Only those claims properly reserved, as provided for in Subsection 107.02, and which are unresolved after completing Steps I and II of the Contractual Claim Resolution Process for the resolution of contract claims, are eligible for review by the Department Claims Committee to the extent provided in that Subsection. If the Contractor states that it does not want Department Claims Committee review of the reserved claims or if it fails to request Department Claims Committee review of reserved claims when it conditions its acceptance of the Final Certificate or if it files suit in a court of law regarding those claims, the Contractor shall be deemed to have waived any ability to have its reserved claims reviewed by the Department Claims Committee.

d. If the Contractor requests review of its reserved claims when it conditions its acceptance of the Final Certificate, it shall send at the same time a copy of its request for review to the Secretary of the Department Claims Committee, PO Box 600, Trenton, NJ 08625-0600. Department Claims Committee review will then take place according to Subsection 107.02.

e. At the election of the Contractor upon completion of the Contract, claims that are unresolved after review by the Department Claims Committee may be submitted to Non-Binding Mediation according to Subsection 107.02.

f. Interest shall neither be paid nor shall it accrue upon the amount of any additional compensation paid in resolution or settlement of a claim resolved through the various steps of the Contractual Claims Resolution Process.

109.13 Contractor's Compliance with NJSA 34:11-56.25 et seq.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The Contractor shall furnish the Engineer with written statements on a form provided by the Department certifying that all employees employed by the Contractor or by any subcontractor have been paid wages not less than those required by the Contract provisions.

109.15 Affidavit Concerning Gifts to Department of Transportation Employees, etc.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The Contractor shall not give any gifts of any nature, nor any gratuity in any form whatsoever, nor loan any money or anything of value to any Department employee, or relative or agent of any Department employee. The Contractor shall not rent or purchase any equipment or supplies of any nature whatsoever from any Department employee, or relative or agent of any Department employee. Similarly, such gifts, gratuities, loans, rentals, or purchases shall not be given to or made from any agent of the Department during the period of time that such agent is performing any function related in any way to the Project. The Contractor shall execute, under oath, an affidavit, on forms provided by the Department, swearing that the Contractor has given no such prohibited gift, gratuities, or loans nor made any such

prohibited rentals or purchases, and acknowledges that the Contractor has a continuing obligation to abide by the restrictions set forth in this Subsection.

DIVISION 200 - EARTHWORK

SECTION 201 - CLEARING SITE

201.05 Removal of Pipe, Inlets, and Manholes.
THE SUBSECTION HEADING IS CHANGED TO:

201.05 Removal and Abandonment of Pipe, Inlet, and Manholes.
THE SECOND PARAGRAPH IS CHANGED TO:

Drainage pipes, inlets and manholes to be abandoned, except items which are to be removed according to the work of other Sections, shall be completely filled in place with CLSM according to the provisions for backfilling with CLSM in Subsection 207. Prior to filling, the Contractor shall dewater and remove and dispose of dirt, refuse, debris, litter and other foreign materials. Castings shall be removed and the walls and ladder rungs removed to a minimum depth of four feet below grade. The bases of drainage structures shall be broken to prevent entrapment of water. The Contractor shall ensure the CLSM is contained in the pipe or structure to be abandoned and does not flow into a pipe or structure to remain by the use of pipe plugs. The Contractor shall remove, to the satisfaction of the Engineer, CLSM in pipes or structures to remain.

THE FOLLOWING IS ADDED:

Drainage pipe and debris from removal or abandonment of drainage pipe or drainage structures shall be disposed of according to Subsection 201.10. Inlet and manhole castings shall be disposed of unless they are to be used on the Project.

201.11 Method of Measurement.
THE FOLLOWING IS ADDED:

CLSM used in the abandonment of drainage pipe and structures will be measured by the cubic yard.

Excavation or the use of any type of sheeting that is required for the removal of the structure, or when such sheeting is to remain for planned new construction that is at the same location of the removal, will not be measured. Payment shall be included in the bid price for "Clearing Site, _____".

201.12 Basis of Payment.
THE FOLLOWING PAY ITEM IS ADDED:

Pay Item	*Pay Unit*
ABANDON PIPES, INLETS AND MANHOLES	CUBIC YARD

THE SECOND PARAGRAPH IS CHANGED TO:

Payment for the Pay Item "Clearing Site" in excess of $_____ will not be made until Completion.

SECTION 202 - ROADWAY EXCAVATION

202.09 Milling of HMA.
2. Construction Requirements.
THE FOLLOWING IS ADDED AFTER THE NINTH PARAGRAPH:

Milled areas shall not be left unpaved for longer than 24 hours, unless approved by the Engineer.

202.15 Basis of Payment.
THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH.

Separate payment will not be made for Sawcutting when used with the Pay Items "Joint Removal" or "Removal of Concrete Base Course and Concrete Surface Courses".

Separate payment will not be made for removal of temporary bituminous concrete pavement ramps.

SECTION 203 - EMBANKMENT

203.08 Control Fill Method.

A. Control Strips.

4. Procedure.

THE LAST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

Density of the control strip will be determined according to AASHTO T 191 or AASHTO T 310 (Direct Transmission Method) except that only one method will be used throughout the Project.

B. Embankment Compaction.

THE THIRD PARAGRAPH IS CHANGED TO:

The density of such inaccessible areas will be determined from the average of five randomly located measurements according to AASHTO T 191 or AASHTO T 310 (Direct Transmission Method) except that only one method will be used throughout the Project.

203.10 Density Control Method.

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The compacted density of embankments will be determined by taking the average of a minimum of five randomly located measurements for each 1,000 cubic yards placed according to AASHTO T 191 or AASHTO T 310 (Direct Transmission Method) except that only one method will be used throughout the Project.

SECTION 204 – BORROW EXCAVATION

204.03 Construction Requirements.

THE THIRD SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

A minimum of two field density tests will be taken according to AASHTO T 191 or AASHTO T 310 (Direct Transmission Method) on each compacted layer at each substructure unit, except that only one of the referenced methods will be used on the Project.

SECTION 207 – SUBSURFACE STRUCTURE EXCAVATION

207.03 Bedding Materials.

SUBSECTION HEADING IS CHANGED TO:

207.03 Bedding and Backfill Materials.

207.03 Bedding and Backfill Materials.

THE FOLLOWING IS ADDED:

Controlled Low Strength Material (CLSM) shall conform to Subsection 919.22

207.04 Construction Requirements.

THE FIRST PARAGRAPH IS CHANGED TO:

Before excavating, existing subsurface structures which may be affected by or interfere with the proposed construction shall be located. If directed, test pits shall be excavated to obtain the required information. Test pits or portions of a test pit shall be dug by hand when in close proximity to utilities or when directed. Excavation beyond that

which is necessary to obtain the required information will not be measured for payment. Test pits shall be backfilled according to Subsection 203.06.

1. Pipes and Culverts.

THE FIRST PARAGRAPH IS CHANGED TO:

The width of trench shall be at least 1 foot – 6 inches greater than the outside diameter of the pipe or culvert. When the material at the bottom of the excavation is rock or other hard material, it shall be removed within 6 inches for reinforced concrete culvert pipe and high density polyethylene (HDPE) pipe, and 1 foot for corrugated metal, steel, or aluminum alloy culvert pipe outside the bottom of the pipe or culvert and the space backfilled with suitable material.

207.05 Bedding for Pipes and Culverts.

THE FIFTH PARAGRAPH IS CHANGED TO:

Bedding for corrugated aluminum alloy culvert pipe and HDPE pipe shall be placed as specified for Class B bedding.

207.06 Backfilling.

A. Pipes and Culverts.

THE ENTIRE SUBPART A. IS CHANGED TO:

Backfill to a height of 2 feet above the top of pipes and culverts, except underdrains, corrugated aluminum alloy culvert pipe and HDPE pipe, shall be made with excavated material free from stones or rock fragments larger than 2 inches in any dimension. Below this level, the backfill shall be placed in layers not more than 6 inches thick, and each layer shall be compacted with flat-face mechanical tampers. Backfill shall be worked into the haunch area and compacted for all pipe.

For HDPE pipe, backfill to a height of 2 feet above the top of the pipe shall be made with excavated material free from class IV or class V materials according to ASTM D2321, with stones or rock fragments no larger than 1½ inch in any direction. Below this level, the backfill shall be placed symmetrically on each side of the pipe in layers not more than 6 inches thick with each layer compacted with flat-faced mechanical tampers for all pipe.

Backfill to a height of 2 feet above the top of corrugated aluminum alloy culvert pipe shall be made with a granular soil with the gradation as specified in Subsection 207.03. Below this level, the backfill shall be placed symmetrically on each side of the pipe in layers not more than 6 inches thick, and each layer shall be compacted with flat-faced mechanical tampers.

All backfill more than 2 feet above the top of pipes and culverts, except underdrains, shall be made with excavated material and compacted in 6 inches layers as follows:

1. By vibratory soil compactors, if the backfill material is predominately sand or sand and gravel.
2. By flat-faced mechanical tampers, if the backfill material is not predominantly sand or sand and gravel.
3. Flat-faced mechanical tampers may be substituted for the vibratory soil compactors where the shoring and bracing of trenches or other special conditions make the use of vibratory compactors impractical.
4. Care shall be taken to avoid contact between the pipe and compaction equipment at all times. All damaged pipes shall be removed and replaced at no additional cost to the State.

The Engineer may direct compaction to be according to Subsection 203.10 except that the frequency of measurements may increase. If a hydrohammer or hoe-pak is used for compacting the backfill over the pipe, a minimum of 4 feet of cover over the pipe shall be provided.

CLSM may be used as alternate backfill material when backfilling trenches for drainage pipe and utility conduit. Combining other backfill materials in the same trench as CLSM shall not be permitted. Mixing and placement of CLSM shall begin only when the ambient temperature is at least 30 °F. During placement, the CLSM mixture shall have a temperature of at least 41 °F and shall not be placed on frozen ground. The CLSM mixture shall be discharged directly from the truck into the trench to be filled with care taken to prevent the pipe from becoming displaced. After placement, the CLSM mixture shall be cured and protected to prevent

damage from cold weather according to Subsection 405.14. CLSM shall not be used to replace pavement, base courses or drainage layers that form the structure of the roadway.

The special backfill in trenches for the underdrains shall be compacted by vibratory compactors. Earth backfill above the special backfill material shall be compacted as specified in Subsection 203.07.

Shoring, bracing, and sheathing shall be withdrawn as the backfilling proceeds. Compaction requirements shall not be compromised due to the removal of sheathing, shoring, trench boxes or other type of excavation support systems.

In rock cuts, the backfill shall be either broken stone or washed gravel.

SECTION 212 - SOIL EROSION AND SEDIMENT CONTROL

212.06 Soil Erosion and Sediment Control Measures.
THE FOLLOWING IS ADDED:

K. Concrete Washout Facility. Design concrete washout facility to fully contain all concrete washout needs of the Work. Concrete washout facility may be portable or a bermed basin that is lined with a single sheet of a minimum of 10-mil polyethylene sheeting that extends over the entire basin and berm to prevent escape of discharge. Place a secure, non-collapsing, non-water collecting cover over the concrete washout facility prior to inclement weather to prevent accumulation and overflow of precipitation. Submit a plan for concrete washout facility for approval to the Resident Engineer 10 days before first concrete pour. Provide concrete washout facility to prevent discharge from concrete trucks or equipment cleaning to inlets, surface or groundwater. Designate an area for the concrete washout facility that is no closer than 50 feet from environmentally sensitive areas such as waterbodies, wetlands, or other areas indicated on the plans. Use signs to designate concrete washout facilities. Ensure that the concrete washout facility complies with all Federal, State, and local laws, rules, and regulations. Ensure that the concrete washout facility is in place before delivery of concrete to the site.

Ensure that concrete washout is limited to the designated areas. Contents of the concrete washout facility shall not exceed 50% capacity of the facility. At or before the 50% capacity is reached, discontinue pouring concrete until the facility is cleaned out. Remove hardened concrete and properly dispose or reuse it as specified in Subsection 202.12. Allow slurry to evaporate or remove from site and dispose of it as specified in Subsection 201.10.

If a lined basin is used, immediately replace the liner if it gets damaged. Remove concrete washout facility when it is no longer needed. Restore the disturbed area to its original condition.

L. Oil-Only Emergency Spill Kit. Before start of construction operations of the Work, place on site at least 2 oil-only emergency spill kits with each kit capable of cleaning up at least 50 gallons of spill. Ensure that each kit contains the items as provided in the Special Provisions:

1. 10 oil-only absorbent booms (5-inch by 10-foot)
2. 10 oil-only absorbent booms (3-inch by 10-foot)
3. 60 absorbent mat-type pads (20-inch by 16-inch)
4. 20 temporary disposal bags and ties
5. 1 emergency response guide book
6. 1 instruction manual
7. 1 wheeled container for the above
8. One 40 lb bag loose absorbent pellets

If a spill occurs, immediately contain and clean up the spill. Notify the Resident Engineer as soon as circumstances permit. Stockpile the excavated contaminated soil separately. Dispose of cleaned up material and used kit material as specified in Subsection 201.10. Replenish kits as necessary to keep at least 2 complete kits on site at all times during construction operations.

212.09 Method of Measurement.
THE FOLLOWING IS ADDED:

Inlet filters for trench drains will be measured by the linear foot along the invert of the trench drain.
Concrete washout facility will not be measured, and payment will be made on a lump sum basis.

Oil only emergency spill kit will be measured by the unit.

212.10 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE ADDED:

Pay Item	*Pay Unit*
CONCRETE WASHOUT FACILITY	LUMP SUM
OIL ONLY EMERGENCY SPILL KIT	UNIT
TRENCH DRAIN INLET FILTERS	LINEAR FOOT

DIVISION 300 - BASE COURSES

SECTION 301 - SOIL AGGREGATE BASE COURSE AND DENSE-GRADED AGGREGATE BASE COURSE

301.05 Compaction.
THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The in-place dry density of each compacted layer will be determined according to AASHTO T 191 or T 310 (Direct Transmission Method) except that only one method will be used throughout the Project.

2. Compaction Acceptance Testing.
THE THIRD SENTENCE OF THE LAST PARAGRAPH IS CHANGED TO:

One density determination will be made at each of the selected locations using AASHTO T 191 or T 310 (Direct Transmission Method) except that only one method will be used throughout the Project.

3. Waiving Standard Compaction Requirements.
THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The compaction requirements in Subsection 301.05, Subparts 1 and 2, are waived.

SECTION 302 – ROAD-MIXED STABILIZATION

302.09 Compaction, Shaping, and Finishing.
A. Compaction.
THE LAST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

The in-place dry density of each compacted course will be determined according to AASHTO T 191 or T 310 (Direct Transmission Method) except that only one method will be used throughout the Project.

SECTION 305 – CONCRETE BASE COURSE

305.02 Materials.
THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Portland cement concrete shall conform to Section 914, except that concrete base course shall attain a strength of not less than 3,000 pounds per square inch in three days.

THE FOLLOWING IS ADDED:

Where concrete base course with calcium chloride is specified, the concrete shall attain a compressive strength of 2,000 pounds per square inch 4 hours after the pour.

305.05 Opening to Traffic.
THIS SUBSECTION IS CHANGED TO:

The opening to traffic shall be as specified in Subsection 405.20.

305.06 Method of Measurement.
THE SUBSECTION IS CHANGED TO:

Concrete base course, with or without reinforcement, of the various thicknesses and types will not be measured, and payment will be made for the quantity in the Proposal adjusted for Change Orders except as provided for in Subsection 109.01.

305.07 Basis of Payment.

THE FOLLOWING PAY ITEM IS ADDED:

Pay Item	*Pay Unit*
CONCRETE BASE COURSE, 6" THICK WITH CALCIUM CHLORIDE	SQUARE YARD

THE FOLLOWING IS ADDED AFTER THE LIST OF PAY ITEMS:

Separate payment will not be made for concrete base course specified to attain a strength of 3,000 pounds per square inch in three days.

DIVISION 400 - SURFACE COURSES

SECTION 404 – HOT MIX ASPHALT (HMA)

404.02 Materials.
THE FOLLOWING IS ADDED TO LIST OF MATERIALS IN THE SECOND PARAGRAPH:

Polymerized Joint Adhesive……..908.08

404.05 Plant Laboratory.
ITEM 23. OF THE FIFTH PARAGRAPH IS CHANGED TO:

23. Microcomputer and workstation requirements shall be according to Subsection 106.06.

404.06 Vehicles for Transporting HMA Mixtures.
THE ENTIRE SUBSECTION IS CHANGED TO:

The mixture shall be transported from the mixing plant to the Project in trucks equipped with tight, clean bodies, which may be lightly coated with a soap or lime solution, or other such non-petroleum-based release agent. Under no circumstance shall a petroleum-based product be used as a release agent.

The trucks shall be permanently equipped with an airfoil that is capable at any speed or under any weather conditions to deflect air over the tarp and to prevent air from going under the tarp. The airfoil will be affixed no more than 2 feet in front of the tarp roll and be at least as high as the top of the tarp roll.

Each truckload shall be covered immediately after loading at the plant with a waterproof tarpaulin of such size to protect the mixture from the weather. The tarpaulin shall be able to withstand normal handling and placement temperatures of up to 400 ºF without endangering the structural integrity and serviceability of the fabric. The tarpaulin shall also comply with one of the following:

1. A heavyweight tarpaulin to completely drape the load. The heavyweight tarpaulin shall have a minimum weight of 18 oz./yd^2 and shall be a minimum of 2 feet wider and 4 feet longer than the truck body. The heavyweight tarpaulin shall securely meet or overlap the top of the tailgate and be securely held in place so as to prevent air from lifting the tarp during transport.
2. A tarpaulin equipped with side and back flaps sufficient to lap down outside along the sides and rear of the truck bed a minimum of 12 inches. The tarpaulin shall be secured by tie downs at a maximum of 5 feet spacing along the sides and rear of the truck.

The truck bodies shall be insulated or heated as necessary, to ensure delivery of the mixture at the specified temperature. Any truck that: causes excessive segregation of the mixture by its suspension or other contributing factors; leaks; causes delays; does not have an airfoil; or does not have an approved tarpaulin shall be removed from the work until such conditions are corrected and the truck is presented for inspection to the Engineer. The Engineer may require that all vehicles for transporting HMA mixture to be used by the contractor be made available for inspection at the plant laboratory prior to any shipments of materials.

404.07 Materials Transfer Vehicle (MTV)
THE ENTIRE SUBSECTION IS CHANGED TO:

The MTV shall independently deliver mixtures from the hauling equipment to the paving equipment. A paver hopper insert with a minimum capacity of 14 tons shall be installed in the hopper of conventional paving equipment when an MTV is used.

As a minimum, the MTV shall have a high capacity truck unloading system which will receive mixtures from the hauling equipment; a storage system in the MTV with a minimum capacity of 15 tons of mixture; and a discharge conveyor, with the ability to swivel, to deliver the mixture to the paving spreader while allowing the MTV to operate from an adjacent lane. In addition, the paving operation must contain a remixing system to continuously blend the mixture prior to placement. The remixing may be done by the MTV or in the paver hopper.

Use of MTV may not be necessary on all projects. Refer to the Special Provisions to determine if its use is either mandatory or optional.

A materials transfer vehicle (MTV) is optional for the construction of the pavement.

404.08 HMA Paver.

THE FIFTH AND SIXTH PARAGRAPHS ARE CHANGED TO:

When wedge joint construction is required, HMA pavers shall be equipped with a sloped plate to produce a wedge edge at longitudinal joints. The sloped plate shall meet the requirements of Subsection 404.17.1.B and shall be attached to the paver screed extension.

THE SEVENTH PARAGRAPH IS DELETED.

404.17 Spreading and Finishing.

SUBPART 1. "LONGITUDINAL JOINTS" IS CHANGED TO:

1. **Longitudinal Joints.** All longitudinal joints shall be cleaned free from dust and coated before placing the HMA with a uniform application of a polymerized joint adhesive selected from the Department's approved products list. The polymerized joint adhesive material shall be applied at a slow rate to ensure an even coating thickness of an ⅛ of an inch over the entire joint face. For echelon paving the longitudinal joints need not be treated with the polymerized joint adhesive.

   The paving shall be done with the spring loaded end plates of the paver in the "down" position. When constructing the first lane, care shall be exercised in rolling so as not to displace the line and grade of the edges of the HMA. The longitudinal joint in one layer shall offset that in the layer immediately below by approximately 6 inches. The joint in the surface course shall be offset from the lane lines by 6 inches except for the centerline of a roadway in which the joint shall fall between the double yellow traffic stripe.

   Paving, compaction and the supply of material shall proceed at a uniform rate with minimal or no stopping.

   If a single paver does not spread the HMA material the entire width of the roadway, two pavers shall be used provided that the rate of production of HMA material can be maintained. The second unit shall follow within 300 feet of the first unit in echelon, so as not to permit cooling of the longitudinal joint between the two lanes. If echelon paving is to be utilized, the distance that the screed and end gate of the trailing paver shall extend over the uncompacted HMA layer behind the first paver shall be 1 inch or less. The inside end gate of the second paver must be set at the same level as the bottom of the screed plate of the first paver. Raking of the joint is not needed.

   A wedge joint shall be constructed when traffic is to be maintained and lift thickness is greater than $2^1/_4$ inches. A vertical edge joint will be permitted for lift thickness $2^1/_4$ inches or less when traffic has to be maintained. For lift thickness greater than $2^1/_4$ inches and traffic is not required to be maintained, a vertical edge shall be utilized.

   Longitudinal joints shall be constructed utilizing one of the following methods:

   A. Vertical Edge Joint. The paver shall be positioned so that in spreading, the HMA material uniformly overlaps the edge of the lane previously placed by 1 to 2 inches and shall be left sufficiently high to allow for compaction. In general, the height of the uncompacted HMA above the compacted HMA shall be $^1/_4$ inch for each 1 inch of compacted mix. The overlapped HMA material being placed in the abutting lane shall be tightly crowded (bumped) over the joint. Any material in excess of the 1 to 2 inch overlap shall be pulled away from the joint and removed instead of broadcasting onto the new mat. When compacted, the new mat at the joint shall be even or slightly higher (Maximum ⅛ of an inch) than the previously placed adjoining mat. If the newly compacted mat results in a depression at the joint of $^1/_8$ of an inch or more lower than the previously placed adjacent HMA layer, all paving operations shall cease until corrective action is taken by the Contractor to prevent reoccurrence. For all longitudinal joints that do not meet this requirement, the Contractor shall saw joints according to dimension guidelines of Subsection 404.19 and seal with an approved sealer.

   B. Wedge Joint. The sloped plate of the paver shall produce a wedge edge having a face slope of 3H:1V. The plate shall be so constructed as to accommodate compacted layer thickness of 2 to 4 inches. The bottom of the sloped plate shall be mounted 1 inch above the existing surface. The plate shall be interchangeable on either side of the screed. The Contractor shall maintain the wedge configuration under traffic conditions.

All loose material shall be removed from the traveled way before opening to traffic. The rolling operation of the adjoining lane shall proceed as indicated in subpart A above, except that care shall be taken to keep coarse aggregate away from the point where the wedge meets the surface of the previously placed lane.

To assure a true line, the paver shall closely follow lines or markings placed along the joint for alignment purposes. All longitudinal joints shall be constructed parallel to the centerlines within a tolerance of plus or minus 3 inches for every 100 linear feet. If this tolerance is not met, the mat shall be cut back to conform. The width and depth of overlapped material shall be kept uniform at all times. Overlapped material shall be luted back, pushing the material off of the cold HMA and onto the hot HMA mat directly over the joint. In no case shall excess material be broadcast across the new layer. All excess material shall be removed.

404.18 Compaction.

THE FOURTH PARAGRAPH IS CHANGED TO:

When compacting the longitudinal edge of the first lanes placed using the wedge joint, the breakdown roller shall not extend more than 2 inches over the top of the sloped face of the wedge joint. The Contractor shall submit a plan, to ensure material at the wedge edge is properly seated and loose material is removed, for the Resident Engineer's approval prior to the commencement of paving operations.

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

Care shall be taken to prevent lateral displacement of the unconfined edge during the compaction operation. The edge of the drums of vibratory or static wheel rollers shall extend over the free edge of the mat by at least 6 inches. When compacting the joint, while paving the adjacent lane, the roller shall be placed on the newly placed HMA and overlap the joint by a distance of approximately 6 inches.

THE FIFTH PARAGRAPH IS CHANGED TO:

Alternate trips of the roller shall be terminated in stops approximately 2 feet from the preceding stop. When paving in echelon, rollers compacting the mat behind the lead paver shall maintain approximately 6 inches of uncompacted material adjacent to the second paver. After mix from the second paver is placed against the uncompacted edge of the mat from the first paver, the rollers shall compact the HMA on both sides of the joint.

THE FOLLOWING IS ADDED AFTER THE ELEVENTH PARAGRAPH:

After compaction has been completed, the pavement shall be free of all visible defects such as segregation, bleeding, ruts, ridges, roller marks, cracking, tearing, raveling, open or segregated transverse or longitudinal joints, depressed or raised areas around manholes or raised areas around inlets in the Traveled Way or any other defects, as determined by the Resident Engineer. All visible defects shall be repaired to the satisfaction of the Resident Engineer at no additional cost to the State.

At the discretion of the Resident Engineer where it is deemed to be impractical to repair such visible defects, a payment reduction due to nonconformance will be applied according to Subsection 404.26.

404.25 Method of Measurement.

THE FOLLOWING IS ADDED AFTER THE SEVENTH PARAGRAPH:

Polymerized joint adhesive will be measured by the linear foot.

THE EIGHTH AND NINTH PARAGRAPHS ARE CHANGED TO:

Sealing of Cracks in HMA surface course will be measured by the linear foot.

Sawing and sealing joints in HMA overlays will be measured by the linear foot. Sawing joints in base or intermediate course will be measured by the linear foot.

THE THIRTEENTH PARAGRAPH IS CHANGED TO:

The monthly asphalt price index will be the average of quotations from suppliers serving the area in which the Project is located. The asphalt price index for North and South of Route I-195 will be posted every month on the Department's web site: www.state.nj.us/transportation/eng/CCEPM/PriceIndex.shtm.

THE FOURTEENTH PARAGRAPH IS CHANGED TO:

The basic asphalt price index will be the previous month's asphalt price index before receipt of bids.

THE LAST PARAGRAPH IS DELETED:

404.26 Basis of Payment.

THE NINTH AND THIRTEENTH PAY ITEMS IN THE FIRST PARAGRAPH ARE CHANGED TO:

SAWING JOINTS IN INTERMEDIATE OR BASE COURSE	LINEAR FOOT
CORE SAMPLES, HOT MIX ASPHALT	UNIT

THE FOLLOWING NEW PAY ITEM IS ADDED:

Pay Item	*Pay Unit*
POLYMERIZED JOINT ADHESIVE	LINEAR FOOT

THE FOLLOWING PAY ITEM IS DELETED:

SEALING OF CRACKS AND JOINTS IN HOT MIX ASPHALT SURFACE COURSE	LINEAR FOOT

THE LAST PARAGRAPH IS CHANGED TO:

Separate payment will not be made for MTV, test strips, and quality control for compaction, including comparison cores, and nuclear density testing. All costs thereof shall be included in the prices bid for Hot Mix Asphalt Surface Course ___, Hot Mix Asphalt Intermediate Course ___, and Hot Mix Asphalt Base Course ___.

THE FOLLOWING IS ADDED:

Separate payment will not be made for sawcutting when used with the Pay Items "Concrete Pavement Repair Prior to Overlay" and "Hot Mix Asphalt Pavement Repair Prior to Overlay."

Separate payment will not be made for removal of asphalt overlay when used with the Pay Item "Concrete Pavement Repair Prior to Overlay."

SECTION 405 – CONCRETE SURFACE COURSE

405.25 Basis of Payment.

THE FOLLOWING IS ADDED AFTER THE LIST OF PAY ITEMS:

Payment for sealing cracks in concrete base course will be made under the Pay Item "Sealing of Cracks and Joints in Concrete Surface Course."

SECTION 406 – SUPERPAVE HOT MIX ASPHALT COURSES

406.12 Air Voids Acceptance Plan.

THE FIRST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

Each mixture in a given lot shall be compacted so that the combined percentage of material below 2.0 percent air voids or above 8.0 percent air voids shall be no more than ten percent.

THE SUBPART (2) IN THE FIFTH PARAGRAPH IS CHANGED TO:

(2) Compute Quality Index.
QL = ($\overline{X}$ - 2.0)/S and QU = (8.0 - $\overline{X}$)/S, where "Q" is the quality index.

406.13 Surface Course Rideability Requirements.
For this Project, the no payment reduction provisions shall govern.

406.14 Thickness Requirements.
THE FIRST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

Conformance to thickness requirements will be judged from the full depth cores taken for surface course air voids determinations evaluated according to Section 990, NJDOT B-4.

THE THIRD PARAGRAPH IS CHANGED TO:
Acceptance will be based on total thickness and thickness of the surface course.

THE FOLLOWING IS ADDED TO THE END OF THIS SUBSECTION:

Evaluation of the surface course will be performed solely to determine whether a remove-and-replace or an overlay condition exists, not for pay adjustment. To be judged acceptable, no more than 10.0 percent of the surface course shall be of deficient thickness as calculated by the procedure below.

Acceptance for surface course thickness will be based on the percentage of the lot estimated to fall below the specified thickness as follows:

(1) Compute the sample mean ($\overline{X}$) and the standard deviation (S) of the N Test Results (X1, X2,..., XN):

$$\overline{X} = \frac{X1 + X2 + ... + XN}{N}$$

$$S = [(X1 - \overline{X})^2 + (X2 - \overline{X})^2 + ... + (XN - \overline{X})^2 / (N-1)]^{½}$$

If for any reason the number of available test results is different from N = 5 for initial testing or N = 10 for retesting, tables for the appropriate sample size are to be used for Step (3).

(2) Compute Quality Index.
QL = ($\overline{X}$ – T_{all})/S, where "Q" is the quality index and T_{all} is the minimum allowable thickness from the following table:

HMA Designation Nominal Maximum Aggregate Size of Mix	Minimum Allowable Compacted Lift Thickness (T_{all})
9.5 MM	1.0 Inch
12.5 MM	1.25 Inches
19 MM	2.0 Inches

(3) Compute Percent Defective.
Using Table 914-5 for the appropriate sample size, determine the percentage of defective material (PD) falling below the allowable thickness associated with QL (lower limit).

(4) Retest.
If the initial series of N = 5 tests produces a percent defective value of PD ≥ 10, the Contractor may elect to take an additional set of N = 5 drilled cores at new random locations, as designated by the Engineer. The additional cores must be taken within 10 Working Days of the receipt of the initial core results. If the

additional cores are not taken within the 10 Working Days, the initial core results (N = 5) will be used to determine acceptance. When additional cores are taken, Steps 1, 2, and 3 will be repeated using the combined data set of N = 10 test values to obtain the total PD estimate using Table 914-5.

(5) Removal and Replacement.
If the surface course fails to meet the acceptance requirement the Department will require removal and replacement of the lot, or milling and overlaying, at the Contractor's expense. When either replacement or milling and overlaying are done, the new courses are subject to the same requirements as the initial construction.

406.15 Combined Pay Adjustment.
THE ENTIRE SUBSECTION IS DELETED AND IS INTENTIONALLY LEFT BLANK:

406.19 Basis of Payment.
THE SECOND PARAGRAPH IS CHANGED TO:

Pay Adjustments for air voids, rideablity, and thickness will be made according to Subsections 406.12, 406.13, and 406.14, respectively.

THE LAST PARAGRAPH IS CHANGED TO:

Separate payment will not be made for MTV, test strips, and quality control for compaction, including comparison cores, and nuclear density testing. All costs thereof shall be included in the prices bid for Superpave Hot Mix Asphalt __ __ __ Surface Course, Superpave Hot Mix Asphalt __ __ __ Intermediate Course, and Superpave Hot Mix Asphalt __ __ __ Base Course.

DIVISION 500 - BRIDGES AND STRUCTURES

SECTION 501 - CONCRETE STRUCTURES

501.11 Limitations of Placing.
THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

In no case, during mixing and placement, shall the temperature of the concrete be less than 60 or more than 90 degrees F.

501.12 Placing Concrete.
15. Pumped Concrete.
THE FOLLOWING IS ADDED:

As per the provisions of 914.04, fresh mixed concrete shall be sampled according to the requirements of AASHTO T 141. Samples shall be taken at the discharge of the concrete pump. If the Engineer believes that this is not a feasible, the pump shall be calibrated to calculate slump and air entrainment losses. These losses shall be deducted from the values as sampled from the concrete truck.

501.17 Curing and Protecting Concrete
A. Curing Concrete Under Normal Conditions.
THIS SUBPART IS CHANGED TO:

Concrete decks, curbs, and tops of sidewalks for one-course deck slab construction shall be cured according to Subheading 4 of Subsection 405.14 with the exception that the minimum wet cure period shall not be less than seven calendar days. The burlap shall be kept continuously wet throughout this curing period. According to the provisions of Subheading 3 of Subsection 405.14, the wet burlap shall be covered with white polyethylene sheeting for the seven-day duration. The polyethylene sheeting shall be lapped at the joints and secured to the deck as tightly as possible. In two-course deck slab construction, the Contractor shall prepare the entire deck surface area according to Subheading 6 of Subpart C of Subsection 518.06 before placing the second course. The second course shall be cured according to Subsection 518.06 C.12.

The time between final finishing and application of the wet burlap shall not exceed 20 minutes in any location within the placement area.

Other concrete structures and concrete surfaces to receive an epoxy coating, rubbed finish or to be covered with another material shall be cured according to Subheadings 2, 3, 4, and 5 of the sixth paragraph of Subsection 405.14.

SECTION 513 – SHEETING, TEMPORARY AND LEFT IN PLACE

513.05 Method of Measurement.
THE FIRST PARAGRAPH IS REMOVED AND THE FOLLOWING IS ADDED:

Temporary sheeting will be measured by the square foot basis. The area measured will be the product of the average height and the length of sheeting that is driven. The average height will be determined by extending a line from the bottom of excavation to a vertical plane of the top of sheeting.

DIVISION 600 - INCIDENTAL CONSTRUCTION

SECTION 601 – UNDERDRAINS

601.01 Description.
THE FOLLOWING IS ADDED:

This work shall also consist of the construction of infiltration trenches.

601.02 Materials.
THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS IN THE FIRST PARAGRAPH:

Aggregate for Infiltration Trenches 901.03

THE FOLLOWING IS ADDED:

Sand for infiltration trenches shall conform to Subsection 901.12, Subpart B.

601.05 Method of Measurement.

THE FOLLOWING IS ADDED:

Infiltration trenches will be measured by the square yard.

601.06 Basis of Payment.

THE FOLLOWING PAY ITEM IS ADDED:

Pay Item	*Pay Unit*
INFILTRATION TRENCH	SQUARE YARD

THE FOLLOWING IS ADDED:

Payment for topsoiling, fertilizing and seeding, and mulching will be made according to Sections 806, 808 and 811.

SECTION 602 - PIPES

602.02 Materials.
THE ENTIRE SUBSECTION IS CHANGED TO:

Materials shall conform to the following Subsections:

Ductile Iron Culvert Pipe 913.02
Ductile Iron Water Pipe 913.03
Concrete Pipe 913.04
Corrugated Aluminum Alloy Culvert Pipe and Pipe Arches 913.05
Corrugated Steel Culvert Pipe and Pipe Arches 913.07
Corrugated Steel Sewer Pipe and Pipe Arches 913.08
High Density Polyethylene (HDPE) pipe 913.11
Mortar and Grout 914.03
Gaskets 919.08

Portland cement concrete for pipe plugs, encasements, or saddles shall conform to Section 914.

Where corrugated metal culvert pipe is designated, corrugated aluminum alloy culvert pipe or corrugated steel culvert pipe may be used.

Where corrugated metal culvert pipe arch is designated, corrugated aluminum alloy culvert pipe arch or corrugated steel culvert pipe arch may be used.

End sections shall be of the same material as the pipe or pipe arch to which the end sections are attached, except that end sections for HDPE pipe for outfall systems shall be concrete.

For jacked pipe, reinforced concrete culvert pipe shall conform to Subsection 913.04 except that the pipe shall be Class V, Wall B, tongue and groove type.

The tube material shall conform to the requirements of ASTM F 1216. The tube shall be fabricated to a size that, when installed, conforms to the internal circumference and length of the original pipe.

The wall color of the interior tube surface after installation shall not be of a dark or non-reflective nature that could inhibit proper closed-circuit television inspection.

All HDPE pipe shall be type S (smooth interior with annular corrugations), with gasketed silt-tight joints according to AASHTO M294

All HDPE pipes shall be in compliance with the requirements of the National Transportation Product Evaluation Program's (NTPEP) evaluation of HDPE and thermoplastic pipe. NTPEP test results shall be furnished to the Resident Engineer and to the Bureau of Materials Engineering and Testing before construction operation.

Tidal check valves shall be the flow-operated type. The valves shall be one-piece elastomeric rubber construction with nylon reinforcement. The valves shall have slip-on connections, secured by manufacturer supplied stainless steel clamps. The port area shall contour down to a duckbill, which shall allow flow in one direction while preventing reverse flow. The duckbill shall be offset such that the bottom line of the valve is flat, with the invert of the pipe parallel with the invert of the valve. The top of the valve shall rise to form the duckbill shape. The bill portion shall be thinner and more flexible than the valve body, and formed into a curve of a minimum of 120 degrees. The bill opening shall be a minimum of 1.57 times the nominal pipe diameter. The tidal check valve shall function such that when the line pressure exceeds the backpressure outside the valve by a certain amount, the line pressure forces the bill of the valve open, allowing flow to pass. Conversely, the bill is forced closed when the backpressure exceeds the line pressure by the same amount. The manufacturer's name, the manufacturing plant, valve size and serial number shall be clearly bonded to the valve. The Contractor shall submit pressure drop test data for the valves to the Engineer from an accredited hydraulics laboratory. The manufacturer shall have ten years experience in the manufacture of duckbill style elastomeric valves.

602.03 Construction Requirements.
THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

602.03 Construction and Inspection Requirements.

A. Construction. Excavation, bedding, backfilling, and disposal of excess material shall conform to Section 207 and the following:

1. Trench openings shall not remain open overnight, unless adequately protected, within or adjacent to roadways on which traffic is being maintained or within the normal limits of pedestrian access.
2. When installing storm drains across private property, the topsoil and sod disturbed by excavation operations shall be salvaged for use in restoring the area to its original condition.
3. Except where necessary to maintain flow, drains shall not be placed in embankment until it has been constructed to a height of at least 3 feet above the top of the pipe or to the top of the embankment, whichever is lower, and then a trench shall be excavated for placing of the pipe.
4. Before the installation of HDPE pipe, and at the discretion of the Resident Engineer, a technical representative from the pipe manufacturer shall be on site for the first day of pipe installation to validate proper installation procedures.
5. Existing drainage flow during construction shall be maintained until proposed drainage facilities are completed and put into service.
6. Pipe shall be handled and stored carefully in order to prevent damage such as cracking, denting and breaking. Pipe shall be lifted off of the delivery vehicle in order to avoid damage while unloading. Pipe shall not be dragged off the vehicle. Pipe shall be stored in an area where it will not be damaged during construction operations. When pipe is stacked, it shall be properly blocked or strapped, and the bell and spigots shall alternate to reduce the load on the bells. Pipe that is damaged, bowed or considered unacceptable for other reasons will be rejected by the Engineer and shall not be used on the Project.
7. If heavy construction equipment (100 kips axle load) will be used in or over the vicinity of HDPE pipe or corrugated aluminum alloy culvert pipe, a temporary compacted cover of a minimum of 4 feet shall be placed over the top of the pipe. The materials for the temporary cover shall be excavated material free from stones larger than 2 inch for concrete pipe, 1½ inch for HDPE and 1 inch for corrugated steel pipe.
8. Sections of pipe damaged during construction shall be removed and replaced.

9. Tidal check valves shall be installed in accordance with the manufacturer's recommendations. The valve shall be supported as recommended by the manufacturer.

B. Inspection.

1. Video Inspection of Pipe.

Video inspection of pipe has been waived for this project.

602.04 Laying of Pipe.

THE LAST PARAGRAPH IS CHANGED TO:

Pipe will be inspected before and during backfilling operations. Any pipe found to be out of alignment, excessively settled, lifted, or damaged shall be removed and relaid or replaced.

602.05 Joining Pipe.

THE FIRST PARAGRAPH IS CHANGED TO:

Joints for rigid pipe shall be made with mortar, grout, or gaskets. Other types of joints recommended by the pipe manufacturer may be permitted as approved by the Resident Engineer. Corrugated metal pipe shall be joined by coupling bands.

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

The use of split couplings for HDPE pipe shall not be permitted unless approved by the Resident Engineer for use in joining field cuts. All joints shall be of the bell and spigot, or bell and spigot type with a gasket according to ASTM F 477 to provide a silt-tight seal. Pipe connections shall be constructed according to the manufacturer's recommendations for assembly of joint components, lubrications and making of joints. The pipe fittings shall be free of inclusions and visible defects. The ends of the pipe shall be cut squarely so as not to adversely affect joining.

602.10 Reinforced Concrete Culvert Pipe, Jacking and Tunneling Methods.

THE ENTIRE TEXT OF THE SUBSECTION IS CHANGED TO:

Sheeting, bracing, shoring, jacking frame, tunnel liners, shields, and other materials necessary for the complete installation of the pipe shall be of the required strength and construction and shall be approved.

Types, sizes, and number of jacks and other equipment used shall be as required for the proper installation of the pipe.

Installation procedures shall conform to the following:

1. **Jacking Method.** Details of the proposed methods and equipment to be used for jacking operations shall be submitted before starting the work. The Contractor shall bear full responsibility for methods used and damage occurring while performing the work. Jacking operations shall be conducted to ensure that there is no interference with the continuous operation of vehicle or rail traffic on the Project.

   Excavation and backfilling of the jacking pit shall conform to Section 207.

   Project site conditions, and the extent to which such conditions may affect methods of operations, shall be determined according to Subsections 102.06 and 108.09.

   Additional compensation or extension of contract time will not be made for inconvenience and delays resulting from the presence of water or for the pumping of water, but such work shall be considered as incidental to the pipe installation.

   The horizontal distance from the face of the jacking pit to the edge of the railbed shall be sufficient to protect the railbed and to ensure maintaining rail operations. The jacking pit shall be sheeted, braced, and shored in such manner as to maintain the stability of the embankment and shall be of the necessary size and design to provide for proper operation of the jacks. The force of the jacks shall be transmitted uniformly to the end face of the end pipe. End sections of pipes that are damaged during jacking shall be replaced without additional compensation.

   As each succeeding reinforced concrete pipe section is placed against the preceding jacked pipe, ½ inch diameter manila rope shall be inserted around the entire groove of the joint and set into place with asphalt cement so that possible spalling of the joint edges, due to jacking, may be reduced and to provide an opening of the inside of the pipe joint for final mortaring.

The leading section of the pipe shall be provided with a shield or cutting edge covering a minimum of the upper third of the pipe perimeter and projects beyond the end of the pipe and supports the embankment materials above. Excavation of materials within the jacked pipe shall be performed by hand methods only. Augers will not be permitted. Conveyor systems will be permitted for removing the soil being dug by hand. Excavation shall not be carried beyond the end of the shield or cutting edge.

Jacking operations shall be performed on a 24-hour basis to prevent the pipes from freezing up. Provisions shall be made to have sufficient materials, equipment and qualified technicians available to deal with any situation that might otherwise result in an interruption of operations.

In the event that an immovable obstruction is encountered ahead of the leading pipe, or further progress in jacking becomes impossible or impractical due to the nature of compactness of the soil, or the direction of the pipe has deviated considerably from the proposed alignment and efforts to correct the misalignment have failed, then jacking from one side may be discontinued and jacking may be begun at the other side. If the jacking operation must again be discontinued, for any of the reasons stated above, the remainder of the installation beneath the embankment must be performed by the tunneling method as specified below.

Precautionary measures must be taken to ensure the flatness of the proposed grade of the invert of the pipe and to maintain correct vertical and horizontal alignment. If necessary, jacking of the pipe may begin at a slightly lower elevation than the prescribed grade or the pipe may be directed downward to offset the possibility of the pipe rising to such an elevation within the embankment as to cause ineffective drainage.

Necessary controls shall be provided to ensure proper horizontal and vertical alignment of the pipe. The alignment shall be checked at the request of the Engineer.

2. **Tunneling Method.** If it is determined that the tunneling method is required, excavation beyond the end of the jacked pipe shall proceed by hand methods only and shall not advance beyond the end of the jacked pipe, shield, or previously placed tunnel liner plate more than the length (along the drain) of the liner plate to be placed.

   Joints in reinforced concrete pipes placed within tunnel liners shall be filled with mortar according to Subsection 602.05. Remaining joint openings on the inside of jacked pies shall be filled with mortar and the inside surface finished smooth. Jointing between pipes that do not meet exactly shall be accomplished by forming a smooth concrete collar or plug, at least 6 inches in depth, to connect the two pipes.

   Sheeting, bracing, and shoring shall be removed provided that removal does not result in an unstable condition in the embankment. If sheeting, bracing, or shoring is left in place, it shall be cut off approximately 6 inches below the finished grade of the embankment or as directed.

3. **Alternate Method.** An alternate method, other than jacking or tunneling, may be employed for installing the pipe beneath the embankment provided the alternate method is approved. If such approval is granted and the alternate method does not produce the desired results, use of such alternate method shall be discontinued and installation shall be completed by the jacking or tunneling method.

602.10 Method of Measurement.

THE FOLLOWING IS ADDED:

Video inspection of pipe will be measured by the linear foot.

Tidal check valves of the various types and sizes will be measured by the unit.

602.11 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE DELETED:

___" X ___" REINFORCED CONCRETE CULVERT PIPE ARCH, CLASS ___	LINEAR FOOT
___" X ___" REINFORCED CONCRETE SEWER PIPE ARCH, CLASS ___	LINEAR FOOT

THE FOLLOWING PAY ITEMS ARE ADDED

TIDAL TIDAL CHECK VALVE, TYPE ___	UNIT
___" REINFORCED CONCRETE CULVERT PIPE, JACKING AND TUNNELING METHODS	LINEAR FOOT

THE FOURTH PARAGRAPH IS CHANGED TO:

Separate payment will not be made for material used as a temporary cover over corrugated aluminum alloy culvert pipe or HDPE pipe.

THE FOLLOWING IS ADDED:

Separate payment will not be made for check valve supports.

SECTION 603 – INLETS AND MANHOLES

603.01 Description.
THE FOLLOWING IS ADDED:
This work shall also consist of the construction of other drainage structures such as trench drains.

603.09 Castings and Fittings.
THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Drainage structure frames, grates, and covers shall be fitted together and match-marked to avoid rocking of covers and grates.

603.12 Method of Measurement.
THE FOLLOWING IS ADDED:

Trench drains will be measured by the linear foot along the trench drain pipe invert.
Drainage structures will be measured by the unit.

603.13 Basis of Payment.
THE FOLLOWING PAY ITEM IS ADDED:

Pay Item	*Pay Unit*
TRENCH DRAIN	LINEAR FOOT
DRAINAGE STRUCTURE	UNIT

SECTION 607 – SIDEWALKS AND DRIVEWAYS

607.02 Materials.
THE ENTIRE SUBSECTION IS CHANGED TO:

HMA shall conform to Section 903 except that the composition of the mixture for the top layer may also include up to 20 percent of RAP. Portland cement concrete shall conform to Section 914 except that driveways shall attain a strength of not less than 3,000 pounds per square inch in three days. Other materials shall conform to the following Subsections:

Soil Aggregate 901.09
Prime Coat:
Cut-back Asphalt, Grade MC-30 or MC-70 ..... 904.02
Tack Coat:
Cut-back Asphalt, Grade RC-70 or RC-T 904.02
Emulsified Asphalt, Grade RS-1, SS-1, or SS-1h 904.03
Cationic Emulsified Asphalt, Grade CSS-1 or CSS-1h 904.03
Curing Materials 905.03
Preformed Expansion Joint Filler 908.01
Reinforcement Steel 915.03
Detectable Warning Surfaces 905.06

Dense-graded aggregate for base course used with HMA sidewalk shall conform to Subsection 901.08.

607.06 Concrete Sidewalks, Driveways, and Public Sidewalk Curb Ramp Delineation.
THE SUBSECTION HEADING IS CHANGED TO:

607.06 Concrete Sidewalks, Driveways, and Detectable Warning Surfaces.

SUBPART 5 HEADING AND ENTIRE TEXT ARE CHANGED TO:

5. **Detectable Warning Surfaces.** Immediately before installing safety red color and Detectable Warning Surfaces, the designated area shall be thoroughly cleaned and dried according to the manufacturer's recommendation. The installation of Detectable Warning Surfaces shall be according to the corresponding construction details and the manufacturer's recommendation. The background surface upon which the detectable warning surface is installed, silicon carbide 60 grit shall be evenly broadcast at a rate of 0.07 pounds per square yards for skid resistance.

   A list of approved manufacturers will be provided in the Special Provisions.

Product Name	Manufacturer	Address / Phone No.
Safti-Trax Rubber Domes and Duraback Coating	COTE-L Industries	201-836-0733

   All areas determined to have been damaged or not to be in conformance with the Specifications or the Plans shall be removed and replaced at no additional compensation to the State.

607.07 Method of Measurement.
THE THIRD PARAGRAPH IS CHANGED TO:

Detectable Warning Surfaces will be measured by the square yard.

607.08 Basis of Payment.
THE FOLLOWING PAY ITEM IS DELETED:

Pay Item	*Pay Unit*
PUBLIC SIDEWALK CURB RAMP DELINEATION	SQUARE YARD

THE FOLLOWING PAY ITEM IS ADDED:

Pay Item	*Pay Unit*
DETECTABLE WARNING SURFACES	SQUARE YARD

SECTION 612 – BEAM GUIDE RAIL

612.08 Beam Guide Rail on Bridges.
THE FOURTH PARAGRAPH IS DELETED.

SECTION 617 - TRAFFIC CONTROL

617.02 Materials.
THE ENTIRE SUBSECTION IS CHANGED TO:

Materials shall conform to the following Subsections:

Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape..... 912.12
Temporary Pavement Markers..... 912.16

617.03 Traffic Control Devices.
THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Traffic Control devices shall be NCHRP-350 crash test compliant by the NJDOT implementation dates stated in the table below and shall be duly certified, if necessary.

Traffic Control Device Category	Commonly used NJDOT Traffic Control Devices	AASHTO/FHWA implementation date for newly purchased Devices	NJDOT implementation date for newly purchased Devices	NJDOT deadline By which devices must be NCHRP-350 compliant
1	Traffic cones, drums and delineator guide posts	10/1/1998	1/1/2003	8/15/2003
2	Vertical panel, portable sign supports, and type III barricades	10/1/2000	1/1/2003	8/15/2003
3	Truck mounted attenuators and traffic barriers-impact attenuators (crash cushions), barrier terminals, and longitudinal barriers	10/01/1998 attenuators 10/01/2002 temporary barriers	10/01/1998	3/15/2005
4	Portable, usually trailer-mounted, devices such as lighting supports, flashing arrows panels, temporary traffic signals, and changeable message signs used in or adjacent to the traveled way	to be announced	6/15/2005	6/15/2007

Note: Resident Engineer's approval shall be obtained to use traffic control devices that are certified NCHRP 350 compliant, but not listed in the table.

Newly purchased devices shall be NCHRP-350 compliant. A list of NCHRP 350 compliant and FHWA approved devices can be found at:

http://www.fhwa.dot.gov/safety/fourthlevel/pro_res_road_nchrp350.htm

NCHRP-350 non-compliant, yet adequately serviceable category 3 traffic control devices, such as truck-mounted attenuators (TMA) purchased prior to 10/01/1998, will be allowed to be used until 03/15/2005 upon submitting new purchase documentation to the Resident Engineer.

3. Illuminated Flashing Arrows. The solar powered arrow boards approved for use on projects are:

a. Work Area Protection – Arrowmaster Model WAAW–15-SB
b. Solar Technology Inc. – Silent Sentinel
c. Trafcon Industries Inc. – Model TC1-15S
d. Protect-O-Flash Inc. – Model No. M-90 (LED bulbs only)
e. TRACOM (Trailer Component Mfg., Inc.)

617.10 Traffic Directors.

THE FOLLOWING NEW SUBPART IS ADDED

C. Emergency Towing Service. Thirty days before the start of Construction Operations, the Contractor shall provide an Emergency Towing Service Plan for approval by the Resident Engineer, which shall indicate the type, quantity, and location of towing equipment to be used.

Emergency towing service shall be provided during those periods of time when construction operations require closure of a lane or lanes of traffic or as directed by the Resident Engineer. Emergency towing service shall consist of having personnel and equipment at the designated locations on the project site capable of removing disabled vehicles, without damage to the vehicle, from the construction zone to the nearest location that will permit the disabled vehicle to be legally parked without interfering with traffic. Emergency towing service shall respond immediately upon notice of a disabled vehicle by the Resident Engineer or Contractor personnel.

617.15 Removable Pavement Marking Tape.
THE SUBSECTION HEADING AND ENTIRE SUBSECTION ARE CHANGED TO:

617.15 Removable Wet Weather Pavement Marking Tape.

Removable wet weather pavement marking tape shall be installed at designated locations and according to the Manufacturer's recommendations. The tape shall be white or yellow and shall be installed in single or double lines, as designated.

The surface upon which the tape is to be installed shall be prepared according to Subsection 618.05. Removable wet weather pavement marking tape shall be installed on dry surfaces, when the surface temperature is between 50 °F and 150 ºF and when the ambient temperature is 50 ºF and rising, and when the weather is otherwise favorable as determined by the Engineer. The tape shall not be overlapped, and only butt splices shall be used.

To ensure maximum adhesion, the tape shall be tamped and a truck shall be driven slowly over the tape several times. The tape shall be removed when no longer required for traffic control.

Removable tape that has become damaged and is no longer serviceable shall be replaced immediately and will not be measured for payment. Tape that is damaged by construction operations shall also be replaced without additional compensation.

617.16 Method of Measurement.
THE SIXTEENTH PARAGRAPH IS CHANGED TO:

Removable wet weather pavement marking tape will be measured by the linear foot of 4-inch wide strips, deducting the gaps.

THE FOLLOWING IS ADDED

Emergency Towing Service will be measured by the number of hours at the project site.

617.17 Basis of Payment.
DELETE THE FOLLOWING PAY ITEM:

Pay Item	*Pay Unit*
REMOVABLE PAVEMENT MARKING TAPE	LINEAR FOOT

ADD THE FOLLOWING PAY ITEMS:

Pay Item	*Pay Unit*
REMOVABLE WET WEATHER PAVEMENT MARKING TAPE	LINEAR FOOT
EMERGENCY TOWING SERVICE	HOURS

SECTION 618 - TRAFFIC STRIPES AND MARKINGS

618.03 Equipment.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The epoxy resin striping and liquid system striping equipment shall be so designed, equipped, maintained, and operated that the material is properly applied in variable widths at a consistent temperature. The striping equipment shall include a tachometer and a pressure gauge and a calibrated holding vessel for each component. The holding vessels for all pigments and hardeners shall have thermometers for measuring the temperature of the vessel contents. The striping equipment shall be equipped with a separate power unit for the pumps used in the mixing and distribution of the components. The following shall be furnished with each striping equipment:

1. A calibration sheet that shows the number of the truck body, the capacity thereof, and an outage table in increments of not over ½ inch. This calibration sheet must be certified by the manufacturer or testing agency.
2. A metal rod for each holding vessel, with accurate divisions marked and consecutively numbered starting at the bottom. The rod shall be not less than 1 foot longer than the depth of the vessel.
3. Slip-proof steps with handrail to reach ground level.
4. Slip-proof catwalk with handrail, running along the top of the vessel.
5. Fire extinguisher in working order.

The equipment for applying thermoplastic material shall be capable of providing continuous mixing and agitation of the material. The parts of the equipment conveying the material between the main reservoir and the shaping die shall be so constructed to prevent accumulation and clogging. The mixing and conveying parts and the shaping dies or spray gun shall be capable of maintaining the material at optimum plastic temperature. The equipment shall be so constructed to ensure continuous uniformity in the dimensions of the entire stripe or marking. The kettle provided for the melting and heating of the thermoplastic material shall be equipped with an automatic thermostat control device and heated by a controlled heat-transfer liquid rather than by a direct flame. The heating kettle and applicator shall be equipped and arranged to meet the National Board of Fire Underwriters and State and Federal regulations. The parts of the equipment that come in contact with the material shall be easily accessible for cleaning and maintenance.

All equipment for applying traffic stripes or traffic markings shall be equipped with glass bead dispensers of a type that will mechanically and automatically dispense beads uniformly on wet stripes or markings at the rates specified.

Equipment for removing the various types of traffic stripes or traffic markings shall be designed with a vacuum system to remove all millings from the pavement surface and prevent airborne residue from escaping into the atmosphere.

All equipment including traffic marking tape applicator and retrometer shall be duly calibrated and shall conform manufacturer's requirements.

618.04 Determination of Acceptability.

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The Contractor shall furnish for approval, 20 calendar days before placement, a complete schedule of operations for applying pavement markings, including the number and types of equipment, and procedures for the Project.

When long-life traffic stripes are required on the Project, the Contractor shall furnish the manufacturer's written instructions for proper use of the materials, including but not limited to, mixing ratios and application temperatures.

The Contractor shall arrange for and have each long-life material manufacturer's representative on the site for the first full day of applying either long-life traffic stripes or traffic markings to provide technical assistance.

The Contractor shall furnish a LTL-2000 Retrometer for the Engineer's use in determining the retroreflectance values of the various traffic stripes or traffic markings. This equipment is for the sole use of the Engineer and will become the property of the Contractor after Acceptance.

Before starting long-life traffic striping operations, the Contractor shall construct one or more test strips. Each test strip shall consist of approximately 500 linear feet of pavement with white and yellow striping (lane and edge lines) or markings similar to that required for the Project. The test strips shall demonstrate the capability of the proposed materials, equipment, and procedures to produce long-life traffic stripes that comply with the Specifications, including dimensions, appearance (stripes with uniform color and crisp, well defined edges), wet film thickness, drying time, adhesion, and glass beads application and retention. A test strip will be required for each applicator equipment used. Additional test strips may be required when major equipment repairs or adjustments are made or when the traffic stripes fail to comply with the Specifications. Permission to proceed with the striping operations will be given when the test strips are in compliance. Each test strip may remain in place and become part of the finished stripes subject to the requirements of Subsection 618.10.

618.05 Surface Preparation.

THE SECOND PARAGRAPH IS CHANGED TO:

The Contractor shall apply a primer-sealer conforming to NJDEP volatile organic content (VOC) requirements to the areas of HMA and portland cement concrete surfaces as required, in accordance with the striping manufacturer's recommendations.

618.07 Long-Life Epoxy Resin Traffic Stripes.
THE SUBSECTION HEADING AND TEXT ARE CHANGED TO:

618.07 Long-Life Traffic Stripes.

The Contractor shall mix epoxy resin material with an automatic proportioning and mixing machine and hot-spray the compound at a temperature between 100 and 130 ºF onto thoroughly dry surfaces. The material shall only be placed during anticipated dry weather when the ambient temperature is a minimum of 45 ºF and the surface temperature is a minimum of 50 ºF. The temperature of the sprayed mixture shall be adjusted as required for prevailing conditions, including the air and pavement surface temperatures, to achieve a no-track drying time of 30 minutes or less. The epoxy resin mixture shall be applied in a wet film thickness of 20 ± 1 mil.

Immediately after, or in conjunction with the epoxy resin application, the Contractor shall apply large glass beads and small glass beads to the wet compound. Each type of bead shall be applied in a uniform pattern and each at a rate of 12 pounds per gallon of epoxy resin material.

The Contractor shall remove all epoxy resin material that has been tracked or spilled in areas outside of the intended placement areas.

Alternate liquid striping materials shall be selected from the approved product list maintained by the Bureau of Materials.

618.08 Long-Life Thermoplastic Traffic Markings.
THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

618.08 Long-Life Thermoplastic and Preformed Tape Traffic Markings.

The Contractor shall apply preformed thermoplastic or hot extruded thermoplastic or preformed tape traffic markings, using equipment and procedures that produce markings that are straight and have sharp edges; that are the specified color, width, and thickness; that have uniform retroreflectivity; and that are properly bonded to the pavement. The thermoplastic material shall be applied as follows:

1. **Preformed Thermoplastic.** The Contractor shall place preformed thermoplastic traffic marking tape on thoroughly dry surfaces and during anticipated dry weather. The preformed thermoplastic tape shall be melted using the flame from a propane-type torch, according to the manufacturer's recommendations, to bond the traffic markings permanently in position.

   If required, the Contractor shall apply additional glass beads to the hot-wet material in a uniform pattern, to attain the minimum initial retroreflectance value specified in Subsection 618.10 for thermoplastic tape.

2. **Hot Extruded Thermoplastic.** The Contractor shall heat the thermoplastic material uniformly and apply the melted material at a temperature between 400 and 425 ºF, to thoroughly dry surfaces and during anticipated dry weather, when the ambient and surface temperatures are a minimum of 50 ºF. The thermoplastic traffic markings shall be extruded on the HMA or portland cement concrete pavement in a thickness of 90 ± 5 mils.

   Immediately after, or in conjunction with the thermoplastic application, the Contractor shall apply, by mechanical means, glass beads to the wet material in a uniform pattern and at a minimum rate of 10 pounds per 100 square feet of markings. Hand throwing of the beads will not be allowed.

3. **Preformed tape.** Preformed traffic tape shall be applied according to the tape manufacturer's installation instructions. The use of primers or other adhesion promoting agents shall be used according to the recommendations of the tape and primer/agent manufacturers. Applied stripes and markings shall be free from snaking, air bubbles, loose edges or any other condition that may cause early failure as determined by the engineer.

   Tape shall be applied at least 3 inches away from longitudinal joints. In areas where it is not possible to avoid a joint beneath the tape, such as transverse construction joints, short lengths of longitudinal joints or other pavement depressions and irregularities directly beneath the tape, the tape shall be cut or treated according to the tape or marking manufacturer's recommendations. In no case shall more than two continuous feet of striping tape be placed over a longitudinal joint.

618.10 Defective Stripes or Markings.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

The Contractor shall replace long-life traffic stripes or traffic markings determined to be in nonconformance with the Specifications, or not placed at the locations or in the dimensions specified. The defective stripes or markings shall be removed according to Subsection 618.12.

The Contractor shall replace defective long-life traffic stripes based on the following:

1. The entire 10 foot broken line if the line to be replaced is determined to have a deficiency.
2. The entire length of epoxy resin striping determined to have a wet film thickness of less than 19 mils shall be restriped with 20 mils of new epoxy resin, based upon the calculated and measured yields.
3. The entire length of striping shall be replaced where improper curing or discoloration has occurred. Discoloration is defined as localized areas or patches of brown or grayish colored epoxy resin material. When improper curing or discoloration occurs intermittently in intervals of 100 feet or less throughout the striping, the entire length of striping shall be replaced from where it first occurs until where it no longer exists plus 5 feet on each end.
4. The entire length of striping that has failed to bond or adhere to the pavement, or has chipped or cracked, shall be replaced from where it first occurs to where it no longer exists. When more than 25 spots (combined or individual) of chipping, cracking or poor bonding/adhesion has occurred within a 1,000 linear foot distance, the entire 1,000 linear feet shall be replaced.
5. The entire length of 1 mile of striping shall be replaced where the initial retroreflectance value of two of four readings for that 1 mile of 4-inch wide striping is not in compliance with the following:
   As measured with a LTL-2000 Retrometer

Type	**White** (Millicandelas per square foot per footcandle)	**Yellow** (Millicandelas per square foot per footcandle)
Epoxy Resin	375	250
Permanent Tape	500	300

6. The entire area of striping shall be replaced where the glass bead coverage or retention is deficient, based on yield determinations made during application and on visual comparisons of the production traffic stripes with those of the test strips.

The Contractor shall replace defective long-life thermoplastic traffic markings based on the following:

1. The entire area of marking determined to be less than the required thickness, to have an incorrect color or width, to have failed to bond to the pavement, or to have chipped or cracked shall be replaced. The minimum replacement area is an individual word or symbol, or entire length of longitudinal line from where the deficiency first occurs to where it no longer exists.
2 The entire area of marking shall be replaced where the initial retroreflectance value is less than 375 millicandelas per square foot per footcandle for white or 250 millicandelas per square foot per footcandle for yellow. Initial retroreflectance will be determined as follows:
   - Step 1: Visual night inspections will be made to identify traffic markings that appear to be below the specified minimum value.
   - Step 2: All retroreflectance measurements taken with an LTL-2000 retrometer will be made on a clean, dry surface.
   - Step 3: a. For word markings, three random retroreflectance measurements will be made on each letter.
     b. For symbols, nine random retroreflectance measurements will be made over the symbol.
   - Step 4: All retroreflectance measurements within an area will be averaged to determine if the minimum retroreflectance requirements are met.

At no Additional Compensation to the State, the Contractor shall remove all traffic paint where the striping or markings will not be directly under long-life material, replace long-life traffic stripes or traffic markings damaged due to any sawing or sealing of joints in the HMA overlay, and replace all existing pavement reflectors that have been marred by striping or marking material as a result of improperly located traffic stripes or traffic markings.

618.12 Removal of Traffic Stripes or Traffic Markings.
SUBSECTION IS RENAMED AND CHANGED TO:

618.12 Removal and Replacement of Traffic Delineation Devices.

A. Removal of Traffic Stripes, Markings, or Reflectors and Castings. The Contractor shall remove all types of traffic stripes or traffic markings by methods that do not damage the integrity of the underlying pavement or adjacent pavement areas, and that do not cause gouging, or create ridges or grooves in the pavement that may result in compromising vehicular control. Obliterating stripes or markings by painting over them shall not be permitted.

Before starting removal operations, the Contractor shall demonstrate the proposed method to accomplish the complete removal of the reflectors and castings and the removal of approximately 95 percent of the stripe or marking without the removal of more than 1/16 inch of pavement thickness. Area of removal includes the area of the stripe or marking plus 1 inch on all sides. Removal operations shall not be permitted until the method of removal has been approved.

Debris from the removal of traffic stripes and markings shall be disposed of according to Subsection 201.10.

Disposal of pavement reflectors and castings shall be in conformance with Subsection 201.10.

B. Removal and Replacement of Pavement Reflector Lenses. The Contractor shall remove existing pavement reflector lenses and install new mono–directional or bi–directional pavement reflector lenses within the limits of construction or as directed by the Engineer. The reflector adhesive used in the bonding of the reflector lenses to the casting shall be in conformance with Subsection 912.17.

The Contractor shall remove and replace pavement reflector lenses by methods that do not damage the underlying castings.

Disposal of pavement reflectors lenses shall be in conformance with Subsection 201.10.

618.14 Method of Measurement.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Removal of pavement reflectors and castings will be measured by the number of units.
Removal and replacement of pavement reflector lenses will be measured by the number of units.

618.15 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE ADDED:

Pay Item	*Pay Unit*
REMOVAL OF PAVEMENT REFLECTORS AND CASTINGS	UNIT
REMOVAL AND REPLACEMENT OF PAVEMENT REFLECTOR LENSES	UNIT
TRAFFIC STRIPES, LIQUID SYSTEM	LINEAR FOOT
TRAFFIC STRIPES, LONG LIFE, PREFORMED TAPE	LINEAR FOOT
TRAFFIC MARKINGS, LINES, PREFORMED TAPE	LINEAR FOOT
TRAFFIC MARKINGS, SYMBOLS, PREFORMED TAPE	SQUARE FOOT

SECTION 619 - SIGNS

619.03 Regulatory and Warning Signs.

THE FIRST PARAGRAPH IS CHANGED TO:

Regulatory and warning signs shall be fabricated of flat aluminum sheets and shall be covered with ASTM D 4956 Type III retroreflective sheeting. Legends, borders, and accessories shall be Type B unless otherwise designated. Signs shall be fabricated according to Subsection 916.08.

SECTION 622 - WATER, GAS, AND SANITARY SEWER LINES

622.01 Description.

THE FOLLOWING IS ADDED:

This work shall also consist of constructing water mains and water valves.

622.02 Materials.

THE FOLLOWING IS ADDED:

Water valves, except tapping sleeves and valves, and valve boxes shall be as supplied by the utility.

Water pipe shall be centrifugally cast ductile iron pipe, Class 54 with push on joints, and shall conform to ANSI/AWWA C151/A21.56. Joints shall be made with rubber Field Lok gaskets for push on joints and shall conform to ANSI/AWWA C111/A21.11. Two bronze wedges for each joint and pipe manufacturer supplied joint lubricant shall be provided. Pipe shall be cement lined (double thickness) with paint seal coat, tar coated on the outside conforming to ANSI/AWWA C104/A21.4. Pipe shall be manufactured by Griffin Pipe Products Co., U.S. Pipe Co., or Atlantic States Cast Iron Pipe Co.

Ductile iron and gray iron water pipe fittings shall conform to ANSI/AWWA C110/A21.10. Ductile iron compact fittings shall conform to ANSI/AWWA C153/A21.53. Gaskets for fittings shall be plain rubber and shall conform to ANSI/AWWA C111/A21.11. Fittings shall be cement lined (double thickness) with paint seal coat, tar coated on the outside conforming to ANSI/AWWA C104/A21.4. Fittings shall be manufactured by Griffin Pipe Products Co., U.S. Pipe Co., Tyler Utilities or Atlantic States Cast Iron Pipe Co.

Tapping sleeves shall be mechanical joint sleeves, Type 9, with 125 pound outlet flange drilling as manufactured by U.S. Pipe Company. Sleeves shall be complete with split follower rings, nuts, bolts and Class A/B gaskets, or Class C/D gaskets, if required for older style larger diameter pipe.

Polyethylene encasement for ductile iron water pipe shall conform to ANSI/AWWA C105/A21.5 and shall be manufactured by Transil Wrap Company or Armin Corporation.

Manufacturer's certification for all water pipe, fittings and tapping sleeves shall be submitted according to Subsection 106.04.

622.03 Construction Requirements.

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

6. Bedding for water pipe shall be according to Subsection 207.05.
7. Disposal of excess material shall be according to Subsection 207.07.

THE FOLLOWING IS ADDED:

A. Water Main.

The Contractor shall perform a test pit at water mains to confirm the actual outside diameter of the pipe prior to ordering tapping sleeves.

All work on water facilities shall be performed by one of the following:

Scafar Contracting Company
225 Pacific Street
Newark, New Jersey 07114
Attn: Jim Scannella

J Fletcher Creamer & Son, Inc.
101 East Broadway
Hackensack, New Jersey 07601-9800
Attn: Vince Valentini

Carson & Roberts
171 Route 94 North
Lafayette, New Jersey 07848
Attn: Vincent Solano

The Contractor shall assign a competent supervisory-level employee experienced in water main installation to oversee construction of the water main work from commencement to completion.

All water materials supplied by the utility will be made available to the Contractor for pickup from the United Water yard located at 135 Hackensack Ave. in Hackensack during regular operating hours. The materials supplied by the utility shall be considered to be material furnished by the Department and subject to the provisions of Subsection 106.11.

Only water piping and appurtenances inspected by a utility representative shall be used in construction. All materials rejected as defective or not meeting the specifications shall be considered unacceptable and subject to the provisions of Subsection 106.11.

Work on water facilities shall be performed in the presence of the utility.

Laying of water pipe shall be according to Section 602 and as specified herein. All pipe shall be laid and maintained to the required lines and grades with fitting and valves as required. The main shall be installed parallel to the curb line and the alignment shall follow the convention of maintaining six feet from the face of curb to the centerline of the main wherever possible. No deviation shall be made from the required line or grade except with the consent of the utility.

Before laying pipe, the Contractor shall submit and obtain approval of the method to control alignment and grade. The system shall be a laser system or grade board setup to establish a reference grade and alignment control directly above or in the pipe.

All water main shall be laid with a minimum cover of four feet measured from the established grade of the surface of the permanent improvement to the top of the barrels of the pipe unless otherwise directed.

Trench openings shall not remain open overnight, unless adequately protected, within or adjacent to roadways on which traffic is being maintained or within the normal limits of pedestrian access.

The trench for the water pipe shall be excavated only so far in advance of laying pipe as the utility permits. The trench shall have a flat bottom hand finished to the grade at which the pipe is to be laid. Portions of the trench excavated below grade shall be corrected by filling with approved material, thoroughly compacting.

Rock and large stones shall be removed to at least 6 inches for water pipe, fittings and valves.

The minimum width of sheeted trenches for water pipe shall be four feet unless approved by the utility. All bracing and sheeting shall remain in place until the pipe is laid, backfilled and the backfill compacted to a depth of at least one foot above the top of the pipe.

No pipe or appurtenances shall be dropped, rolled or dumped into the trench. They shall be carefully lowered into the trench one piece at a time in such a manner as to prevent damage to the material and their coatings. No water pipe or appurtenance shall be placed in the trench without the proper safeguards in place to prevent damage or shock.

Before lowering and while suspended, the water pipe shall be inspected for defects. The ends shall be dusted with talcum powder to detect cracks.

All foreign matter and dirt shall be removed from the inside of water pipe and appurtenances before they are lowered into the trench. An approved circular bristle brush, snugly conforming to the inside diameter of the pipe shall be passed through every piece of pipe and all bells and spigots shall be wire brushed and wiped clean. The interior of pipe and appurtenances shall be kept clean during and after installation until the pipe section is jointed solid. Where mechanical joint fittings are used and follower retainer glands are installed, care shall be taken not to overstress set screws and crack the pipe. At times when pipe laying is not in progress, the open ends of pipe shall be closed with solidly set tapered wooden plugs or other approved methods so that no trench water or dirt can enter the pipe. The open ends shall be plugged during all work breaks.

All pipe shall be laid upon sound soil, true and even, so that the barrel of the pipe is in firm contact and has bearing over its full length. Unless otherwise directed, water pipe shall be laid with bells facing in the direction of laying. No pipe shall be laid in water or when trench conditions are unsuitable for such work. The Contractor will not be permitted to support pipe, fittings or valves on blocking except by permission of the utility.

In areas where soil conditions may be corrosive or where directed by the utility, all pipe, fittings and appurtenances shall be installed in a polyethylene pipe wrap sleeve. The pipe wrap shall be 8 mils thick and approximately 22 feet long and accommodate one length of pipe with a one-foot overlap. The overlaps shall be secured to the pipe with Scotch Wrap Tape or approved equal. All procedures related to the installation of the polyethylene sleeve shall conform to ANSI/AWWA C105/A21.5

If necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, to avoid obstructions, to plumb valve stems or where long radius curves are permitted, the degree of deflection shall not exceed that specified below per foot of pipe except as approved by the utility.

	Pipe Diameter			
Type of Joint	6”	8”	12”	24”
Mechanical	1”	0.75”	0.75”	

Push On	0.75”	0.75”	0.75”

Backfill shall be according to Subsection 207.06 except that below the centerline of the pipe, backfill shall be free of all stones and rock fragments and shall be deposited by hand in the trench on both sides of the pipe and compacted with flat-face mechanical tampers to provide a hard bed for the lower half of the pipe. Backfill around valve boxes shall be performed by hand and properly compacted to eliminate the possibility of the boxes shifting, rendering the valves inoperable.

1. **Jointing Pipe.** Bronze wedges shall be inserted at each joint as directed by the utility to assure the continuity required by electrical devices used to locate buried mains.
   a. **Mechanical Joint.** Mechanical joints include all joints with sealing gaskets compressed by follower or retainers assembled with bolts. The socket and plain end of the pipe shall be wire brushed and washed with soapy water. While the pipe is suspended over the trench, the follower and washed gasket shall be slipped over the plain end prior to inserting into the socket. The small side of the gasket and lip side of the follower shall face the socket. The plain end of the pipe shall be inserted into the socket, the pipe centered and the gasket finger pushed into the socket until evenly seated. The follower shall be slid into position and the bolts finger tightened. Pipe deflection, if required, shall be made at this time. The bolts shall be tightened with a wrench alternately and evenly, bottom, top and so on all around. It is essential that the gland be brought up evenly around the joint. Overstressing the bolts to compensate for poor installation will not be permitted. For the most common bolt sizes, the range of torque shall be kept between 70 to 90 foot-pounds, which can be obtained by a wrench 10 inches long. If sealing is not obtained, the joint shall be disassembled and reassembled after thorough cleaning.
   b. **Push On Joint.** Push on joints include all joints with sealing gaskets confined in the groove of the bell by inserting the spigot into the bell of the pipe. The sharp leading edge of cut plain ends shall be dulled by filing or grinding prior to making the joint. The socket and plain end of the pipe shall be wire brushed, washed with soapy water and dried clean while suspended over the trench. The gasket shall be washed clean, flexed, and placed evenly and smoothly into the socket with the groove of the gasket fitting the bead of the socket and the large end of the gasket facing into the pipe. Lubricant shall be applied, the plain end of the pipe centered and pushed into place until contact is made in the socket. If assembly is not made with reasonable force to make the joint, remove the pipe, check the condition and position of the gasket prior to reapplying force. If the joint is satisfactorily made, the pipe can be deflected if so required.

2. **Tapping Sleeves and Valves.** The Contractor shall install tapping sleeves and valves and the utility will make the actual cut into the existing main. Prior to installing the tapping sleeve, the Contractor shall clean the pipe thoroughly, with particular care to the area where the gaskets will seal. The back half of the sleeve shall be installed and blocked under the pipe so the side flanges face up. The side flange O-ring gaskets shall be lubricated with pipe joint lubricant and laid in the side flange grooves so an equal length of gasket extends beyond each end. The outlet half of the sleeve shall be placed on top and both halves bolted together. The side flange bolts shall be tightened from the center out until iron to iron contact is made between the side flanges. If iron to iron contact cannot be obtained, there is an obstruction that must be removed before proceeding. Final bolt torque shall be 80 to 90 foot-pounds. Excess gasket material shall be cut away with a sharp knife, leaving approximately 1/8 inch protruding evenly into the mechanical joint gasket seat. Mechanical joint gaskets of the proper thickness for the pipe shall be lubricated and installed, followed by installation of the split follower rings. The parting lines of the sleeve, the mechanical joint gaskets and the split follower rings shall not be allowed to coincide. The bolts shall be hand tightened, the sleeve rotated into final position and the mechanical joint bolts tightened alternately in pairs 180 degrees apart to 75 to 90 foot-pounds torque and the tapping valve installed.The Contractor shall field and pressure test the mechanical joint tapping sleeve and valve assembly in the presence and to the satisfaction of the utility. The Contractor shall provide all testing equipment. The assembly shall be tested by closing the tapping valve and connecting a hand air pump to the pipe tap on the outlet neck of the sleeve with a pressure gauge and valve mounted between the tap and pump. The pressure shall be increased to a twenty-five percent greater than normal operating pressure at that location, but not less than 150 pounds per square inch. When the test pressure has been reached, the valve shall be closed and the readings of the test gauge recorded. Any loss of pressure is an indication of a leak, which must be located and eliminated. The duration of the test shall be ten minutes for sleeves up to twenty inches and thirty minutes for larger sleeves. If leakage occurs on mechanical joints, the mechanical joint gland bolts shall be tightened uniformly until the leak stops. Beginning 90

degrees from the leak, the gland bolts shall be tightened alternately toward the leak. If the leak occurs on the side flange of the sleeve, the leak may be occurring form where the side flange gasket contacts the mechanical joint gasket. The mechanical joint gland bolts shall be tightened beginning 90 degrees from each flange and alternately tightened toward the leak.

The utility will furnish the tapping valve and will retain subsequent control of the tapping valve at all times.

3. **Gate Valves, Fittings and Blowoffs.** Gate valves, pipe fittings and blowoffs shall be set and jointed to the pipe as specified for inspecting, cleaning, laying and jointing pipe.

   Cast iron valve boxes shall be firmly supported, with the bottom of the box at the level of the valve packing gland and maintained centered and plumb over the operating nut of the gate valve, with the box cover flush with the surface of the finished pavement or as directed by the utility.

   Drainage branches or blowoffs shall not be connected to any sewer or installed in a manner that will permit back-siphonage into the water distribution system.

4. **Disinfection, Pressure and Leakage Tests.** The Contractor shall provide and install chlorination taps for the utility's use in disinfecting the pipe interior. Disinfection procedures will vary depending on the type of installation and conditions of the work. Generally, pipe installations twelve inches and smaller in diameter and not exceeding 1,000 feet in length will be disinfected prior to being laid in the trench. For other installations, chlorine gas solution will be injected into the jointed pipe while being filled with water. However, if ground or trench conditions are such that contamination of installed pipe is possible, the utility will disinfect all installations by chlorine gas solution after jointing has been completed.

   Contact time for disinfection by chlorine gas solution may extend to 24 hours after the line has been filled. Flushing of the line will continue until a satisfactory water discharge is obtained. Upon approval after disinfection and flushing, pipe installations 1,000 feet and less in length will be slowly subjected to the water pressure normal to the area by the utility after the trench has been backfilled. The installation will then be examined for leakage and if defects are found, the Contractor shall make the necessary repairs until all defects are eliminated.

   For all other continuous pipe installation, or segregated section thereof, the pipe will be disinfected, flushed and slowly subjected to the normal water pressure as above. After detected defects have been repaired by the Contractor, the installation shall remain under normal operating pressure for at least three weeks and then shall be subjected to hydrostatic pressure fifty percent greater than normal operating pressure, but not less than 150 pounds per square inch or more than 300 pounds per square inch, at the point of lowest elevation, for a duration of at least one hour.

   The Contractor shall conduct hydrostatic tests. The Contractor shall furnish materials and equipment required for tests, including force pumps, gauges, calibrated tank or barrel. The Contractor shall furnish all labor, materials and equipment required for installing temporary plugs, flanges or bulkheads, screw plugs for holes tapped in the pipes, connecting piping, tapping of pipes for pump and gauge connections and bracing incomplete work.

   The entire installation under test pressure will be thoroughly examined for evidence of leakage. Cracked or defective pipe, fittings or valves discovered shall be removed and replaced by the Contractor and the test will be repeated until satisfactory.

   No installation will be approved until or unless the leakage is less than 0.75 gallons per 24 hours per linear foot of joint. The length of joint is defined as the product of the nominal diameter of the pipe in feet, the number of joints in the section being tested, and the factor 3.

   Should any test of combined sections of pipe laid disclose leakage greater than specified, or if individual sections show leakage greater than the specified limit, the Contractor shall, at his own expense, locate and repair the defective joints until the leakage is within the specified allowance.

622.04 Method of Measurement.

THE FOLLOWING IS ADDED:

Pipe of the various sizes will be measured by the linear foot. Pipes with skewed ends will be measured along the invert.

Supporting water mains will be measured by the number of locations at which drainage lines are being constructed under water mains and the utility requires the main to be supported.

622.05 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE ADDED:

Pay Item	*Pay Unit*
SUPPORT WATER MAIN	LOCATION
___" WATER VALVE	LINEAR FOOT

THE FOLLOWING IS ADDED TO THIS SECTION:

INSTALLATION OF GAS MAINS AND APPURTENANCES

Description.

The work for these items shall consist of the Contractor hiring a prequalified gas Subcontractor to perform the work as specified within. For these items of work Subcontractor shall mean any of the qualified gas contractors listed under the construction requirements noted below and hired by the Contractor to perform the installation of gas mains and appurtenances for the gas utility company.

However, the Contractor shall perform construction layout, traffic control, sawcutting, pavement removal, removal of concrete base and surface courses, removal of excess gas, excavation unclassified, temporary pavement, final pavement restoration, sidewalk or landscape restoration as necessary for this project. It is the responsibility of the Contractor to review the details of the work required for all gas facilities and coordinate all construction activities with the gas Subcontractor.

This actual work shall consist of the construction of new gas lines, valves, vents, and appurtenances. The Subcontractor shall furnish all supervision, labor, tools and equipment to pick up and/or unload pipe, fittings and miscellaneous materials supplied by Public Service Electric and Gas Company (PSE&G). The Subcontractor shall excavate, sheet and dewater excavations, place and tamp backfill. The Subcontractor shall place backfill up to the bottom of the proposed pavement, sidewalk or in a landscape area the bottom of topsoil. The Subcontractor shall fabricate, weld, lay, pig pipe and internally clean pipe. The Subcontractor shall also clean, sandblast, coat and wrap all buried pipe and joints, perform an air test, pour concrete pads for valves and line stops.

This work shall also include the Subcontractor assisting PSE&G crews to perform cutout, hot taps, line stops and make gas main tie-ins. Any material, equipment, or related work required for the completion of the pipe installation which is not indicated or specified herein, shall be provided at no additional cost. This shall also include the placement and removal of any temporary fencing or steel plates used to keep any gas excavation open overnight.

This work shall also consist of the excavation and placement of gas, pipe bedding and the placement of a permanent gas, protective steel plate to protect an existing gas main or proposed that will remain in place.

This also does not preclude the Contractor from hiring the gas or some other Subcontractor to perform the work of construction layout, traffic control, sawcutting, pavement removal, removal of excess gas, excavation unclassified, temporary pavement, final pavement restoration, sidewalk or landscape restoration at no additional cost to the State.

Materials.

All material for gas work will be supplied by PSE&G except for the necessary gas, backfill, aggregates, minor accessories and concrete. Pipe and large fittings will be delivered directly to the job site by PSE&G. These materials shall also include the gas protective steel plate if required to protect an existing or proposed gas main. The Contractor shall be responsible for the delivery of the pipe within the jobsite unless, where possible, other delivery arrangements can be made in which the Subcontractor must then supply unloading equipment and personnel. Other material required to complete the work on this project may have to be picked up by the Subcontractor at PSE&G's Central Stockage Facility in Sayreville. Miscellaneous materials shall be picked up at PSE&G's Store Rooms located at pertinent District Headquarters and/or other PSE&G designation for delivery to the job site. The Subcontractor shall be responsible for the adequate storage and protection of the pipe after acceptance by a representative of the Subcontractor.

All nonstandard pipe elbows will be supplied by PSE&G as standard elbows. The Subcontractor shall cut the standard elbows, 45 or 90 degrees, as field conditions warrant.

PSE&G will make every reasonable effort to make available materials to be furnished by PSE&G to avoid delays in the Contractor's work. However, should PSE&G for any reason, fail to make available any such item, and delay results, the Contractor will not be entitled to additional compensation on account of such delay.

The Contractor shall be responsible for removing all surplus pipeline materials from the job site. All excess pipe, fittings and other miscellaneous materials furnished by PSE&G shall be returned to the pertinent District Headquarters and/or other PSE&G designation.

The concrete support pad for line stops and valves shall be Class B concrete as specified in Section 914.

Gas, excavation for tests pits shall be backfilled in accordance with Subsection 203.06.

Materials for gas, pipe bedding shall conform to Subsection 207.03 for class B pipe bedding.

Materials for broken stone or washed gravel shall conform to Subsection 901.04 for broken stone and Subsection 901.05 for washed gravel.

Materials for gas, coarse aggregate shall be Size No. 57 shall conform to Subsection 901.03 and Table 901 – 1.

Materials for gas, backfill shall conform to Subsection 203.03 for borrow excavation, selected material with a soil designation I – 13.

Construction Requirements.

1. **Qualified Gas Contractors.** State's Contractor shall subcontract this gas work to one of PSE&G's qualified gas contractors. The following contractors are qualified by PSE&G to perform all work called for in this project:

Bar San Contractors, Inc. 555 Industrial Road Carlstadt, NJ 07072	Charlie Fasciano Tel: 201-842-7470 Fax: 201-842-7475
Henkels & McCoy, Inc. Elbow Lane P.O. Box 218 Burlington, NJ 08016	Al Luciatti Tel: 609-387-9000 Fax: 609-387-9682 Harry Tucker Tel: 908-474-0500
J. F. Creamer & Son, Inc. 1701 East Linden Ave. Linden, NJ 07036	Ted Paliwoda Tel: 908-925-3200 Fax: 908-925-3350
DiClemente Contractors 3100 Dell Avenue No. Bergen, N.J. 07047	Andy DiClemente Tel: 201-319-0900 Fax: 201-319-9312
Kemsco Construction, Inc. P.O. Box 10019 Newark, NJ 07114	Ralph Serpe Tel: 973-733-2255 Fax: 973-642-2928
Napp Grecco Company 1500 McCarter Highway Newark, NJ 07104	Gary Pilik Tel: 973-268-3639 Mario Maraschi Tel: 973-268-3617
Lantier Construction Co. 145 Dey Grove Rd. Monroe Twp., NJ 08831	Doug Lantier Tel: 732-446-1437 Fax: 732-786-0613
Roman E&G Corp. 14 Ogden St. Newark, NJ 07104	Michael Lamorgese Tel: 973-482-1113 Fax: 973-482-2501

It is the responsibility of the Contractor to contact the qualified contractors listed when preparing their Proposal for the Project.

2. **Compliance with PSE&G Specifications and Standards.** All gas work on this contract shall be performed in accordance with PSE&G General Specifications 94-5000 and 2000-D-100 and Gas Distribution Standards Manual. Only the PSE&G qualified gas contractors may obtain a copy of these PSE&G documents for security reasons. Upon completion of the work, the Subcontractor shall submit to PSE&G as-built drawings

as per PSE&G's criteria which includes plans and profiles in MicroStation format. As-built drawings shall be completed by the Subcontractor and accepted by PSE&G before the Engineer will issue a Certificate of Completion in accordance with Subsection 105.23 to the Contractor.

3. **Scheduling of Work and Interruption to Utilities and PSE&G Operations.**
   A. Contractor shall provide the Engineer and PSE&G with a detailed schedule of the work to be performed in accordance with Subsection 108.04 to include the work being performed by the Subcontractor. This schedule shall include the number of crews to be working, work locations, and time of day work shall be performed (night shift, day shift, weekends, etc.). The Subcontractor shall coordinate closely with PSE&G once construction begins. The Contractor shall notify PSE&G in writing, through the Engineer, at least four weeks prior to construction of any gas activities. The Subcontractor shall be required to supply the labor and other resources necessary to meet the projected work schedule of the Contractor.
   B. The work to be performed under this contract requires special attention to the scheduling and conduct of work in connection with the existing PSE&G (gas) utilities and the NJDOT's operations. No work is to be performed on gas facilities from October 1 through April 30. This period can be extended based on weather conditions and system demand requirements as determined by PSE&G.
   C. The Subcontractor shall perform the work as specified herein in a diligent and timely fashion so as to minimize any adverse impact with PSE&G's activities and inconvenience to their operations and personnel. Hence, the Contractor shall coordinate all his operations, but most importantly gas construction activities with PSE&G, affording all reasonable cooperation and taking all prudent precautions in order to prevent excess hardship, noise or other nuisance.
   D. Insofar as practicable, the Subcontractor's operations shall be confined to the immediate area. The Subcontractor shall not use any more space than reasonably required for gas work and shall perform the complete work returning each area to normal usage as soon as practicable.
4. **Safety.** All excavation work shall be performed in accordance with 29 CFR Part 1926, Occupational Safety and Health Standards – Excavation. The Subcontractor is required to work in compliance with the Minimum Federal Safety Standards for Gas Lines (Part 192, TITLE 49, Code of Federal Regulations). Work shall be in compliance with all State, County or Municipal Ordinances.
5. **Environmental.** Work shall conform to all Federal, State and Local environmental requirements, as well as to PSE&G Specifications and the Contract Special Provisions. All applicable permit requirements for physical site protection measures must be adhered to throughout construction. During the construction period, the Contractor shall assume full responsibility for site dust control measures and for any and all pollutants caused by this work which may be detrimental to the environment.
6. **Gas, Excavation in General.** The Contractor shall provide traffic control, construction layout, sawcutting the existing pavement or sidewalk where gas lines are to be installed and remove and dispose of these materials. The Contractor is also required to remove and/or use on the project any excess gas, excavation unclassified excavated by the Subcontractor in accordance with the Plans and Section 202. The Contractor shall also remove and dispose of any unsuitable excavation and miscellaneous debris that is determined to be unsatisfactory for the project. However, when the Contractor directs the Subcontractor to perform this work, the Subcontractor shall follow the plan established by the Contractor for such removal. If no plan has been established by the Contractor then the Contractor shall develop the plan, have it approved by the Engineer and require the Subcontractor to follow it.
7. **Verification of Contract Documents.** The Contractor and his Subcontractor shall examine the Drawings and Specifications before submitting a proposal, and shall identify the conditions under which the Subcontractor shall be obliged to operate. Any items of work not listed below shall be at no additional cost to the State. If the Subcontractor finds any errors or omissions during their evaluation of the plans for this project that are normally included as part of a gas contract, they shall be brought to the attention of the State during the advertising period for this project.
8. **Roadway Lane Closings.** Roadway lane closings shall be required when work is being performed in the roadway. The Contractor shall coordinate and schedule the lane closures with the NJDOT, as appropriate, in accordance with the Traffic Control Plans, NJDOT Standard Traffic Control Plans and Section 617 of the Specifications. Before performing any work the Subcontractor shall insure the Contractor has all the necessary traffic control devices in place.
9. **Staging Areas.** Certain areas shall be designated as construction lay down/staging areas. The Subcontractor in coordination with the Contractor is required to provide whatever physical security is necessary to secure the material storage areas utilized, for which additional payment will not be made.

10. **Temporary Fencing and Plates.** Temporary fencing and/or plates shall be required to secure excavations that are to remain open overnight. The Subcontractor shall supply and install temporary fencing and plates, as necessary. Plates shall be utilized when and where necessary or as directed by PSE&G or the Engineer to secure excavations required to remain open over night. The Subcontractor shall install and maintain these plates in accordance with local Municipal, State and/or County specifications at no additional cost to the State.
11. **Site Supervision.** It is the responsibility of the Subcontractor to have a competent person at the job site to determine the need for sheeting and shoring of the trench excavation. Additional payment will not be made for any sheeting or shoring required to perform the work.
12. **Quality Control.** PSE&G will furnish an inspector on site to inspect the construction of the work by the Contractor's Subcontractor. All work shall be done in a workmanship like manner and shall be subject to the requirements, inspections, and approval of the PSE&G inspector in coordination with the State's inspector and the Engineer. PSE&G's inspector will also track materials taken from PSE&G storerooms. PSE&G's inspector will immediately notify the Engineer of any work being performed by the Subcontractor that does not meet the requirements of the Contract Agreement between the State and PSE&G including but not limited to the Plans, permits and Specifications. The Engineer will be responsible for directing the Contractor to direct the Subcontractor to correct defective work to meet the requirements herein. The PSE&G inspector will immediately notify the PSE&G engineer if the requirements of the Contract Agreement between the State and PSE&G remain unresolved or the correction of the defective work does not meet the requirements herein. If the PSE&G engineer is not satisfied that the work meets the requirements of the Contract Agreement between the State and PSE&G, the PSE&G engineer will notify the Department's Project Field Manager and the Department's Utility Engineer immediately. If the PSE&G engineer is still not satisfied that the work meets the requirements of the Contract Agreement between the State and PSE&G, the PSE&G engineer will notify the Regional Construction Engineer and the Department's Project Manager immediately to resolve the problems.
13. **Damage.** All work shall be performed without damage to adjacent structures, property, and/or equipment. This includes, but is not limited to buildings, fences, roads, parking lots, bridges, culverts, drainage ditches, waterways, and wetlands. However, should damage occur, the Subcontractor shall repair and restore the damaged item to its original condition at no additional cost to the State or PSE&G.
14. **Clean-Up.** The clean-up procedure of the job site is subject to the approval of the Engineer. The Subcontractor shall, at all times, keep the site free from accumulations of waste materials and rubbish. A waste receptacle and recyclable receptacle shall be provided and maintained on the job site. There shall not be any disposal of waste in the trench excavation for any gas work.
15. **Existing Utilities and Structures.**
    A. The Subcontractor shall be responsible for determining the location, protection and permanent support of all surface and subsurface structures encountered in the work area, including but not limited to underground electric, telephone, water, sewer or storm drains.
    B. The Subcontractor shall notify the Engineer and the PSE&G inspector when excavation is required within three meters of any gas, oil, water lines, telephone, electrical, or fiber optic cables. The notice shall be provided whether such lines belong to PSE&G, or are foreign; in order that PSE&G and Subcontractor may agree upon and approve an excavation method for their protection.
    C. The Contractor shall coordinate with the Subcontractor to provide prior notice to the PSE&G inspector, through the Engineer, when crossing foreign lines. This allows the PSE&G inspector time to notify the owner of any possible pipeline or other facility crossing and provide that owner the option to have a representative present at the time of excavation or other construction.
    D. In work areas that are adjacent to or under overhead power line rights of way, the Contractor and Subcontractor shall be aware of the hazards of operating their equipment and take precautions to insure the safety of personnel and the integrity of the existing power line facilities.
    E. All work shall be performed in accordance with NJSA 34:6-47 "High Voltage Proximity Act".
    F. All street signs, mailboxes and similar items shall be appropriately removed and reinstalled by the Subcontractor in accordance with Section 201 as required.
    G. The Contractor shall also comply with the supplemental requirements on the Plans.
16. **Restoration and Landscaping in General.** The Contractor shall be responsible for all temporary and final restoration or landscaping within the right-of-way. The Subcontractor shall be responsible for all temporary and final restoration or landscaping outside the right-of-way. However, the placement of steel plates over gas excavations to remain open overnight shall also be the responsibility of the Subcontractor. When the work is

inside the right-of-way the Subcontractor shall backfill up to the bottom of a temporary pavement box, permanent pavement box, sidewalk box or the bottom of topsoil. The Contractor shall be required to place all materials in the temporary pavement box, its removal, the final pavement box, sidewalk box or topsoil and fertilizing and seeding. When the restoration area is outside the right-of-way, the Subcontractor shall be responsible for construction layout, excavation and all other operations necessary up to a complete restoration of the areas impacted by their work to the satisfaction of the Resident Engineer. Landscaping shall conform to the requirements under Division 800 of the Specifications. The Subcontractor shall also provide fencing and/or steel plates for any gas excavations left open overnight. Final restoration by the Contractor, inside the right-of-way, shall conform to the Plans and Specifications. The Subcontractor shall restore all areas impacted by their work, outside the right-of-way, to its original condition and satisfaction of the Resident Engineer. Separate payment will not be made to the Subcontractor for this excavation, restoration or landscaping work which may also include replacement of sidewalks and driveways.

17. **Tie-in and Gas Out.** Subcontractor shall make and have available all equipment and personnel needed to make simultaneous cutout and tie-in of both ends of the new pipe. PSE&G shall be responsible for purging and cutting the pipeline. Once started, the work shall continue until completed. Tie-in excavations shall be left open and/or plated as required, or until PSE&G has completed all its work.
18. **Sheeting and Dewatering.** The Subcontractor shall be responsible for the design and installation of all solid tight sheeting. The Contractor shall provide all dewatering required to affect the work to be performed as part of this contract. Dewatering operations shall be performed in accordance with Section 212. The Contractor shall perform the dewatering for the gas Subcontractor's gas facilities work.
19. **Pressure (Air) Test.** The Subcontractor shall perform an air pressure test on all new piping in the field including the tie-in pieces. The proper time, method, and sequence of operation for the testing of the line shall be in coordination with the Engineer at PSE&G's direction and under direct PSE&G supervision. The minimum test duration times are to be provided by PSE&G. The cost of this test, including but not limited to appropriate excavations, and the passing of a scraper barrel pig (steel mains) or poly pig (plastic mains), shall be included in the overall cost of the proposed items, noted below, for this work scheduled in the Proposal.
    A. The Subcontractor shall supply all required small fittings, valves, hoses, pipe, etc. to connect the test equipment. The Subcontractor shall also supply two compressors to attain the required test pressures, canvas or burlap to cover the exposed piping, qualified personnel and equipment required to install, operate, and remove equipment and temporary piping at no additional cost to the State.
    B. A PSE&G representative shall supervise the test after the piping is pressurized. The section under test should be allowed to reach equilibrium before the test is started. If pressure loss is observed, the Contractor shall be responsible for locating and repairing any and all leaks at no additional cost to the State.
    C. All steel mains shall be pigged using a scraper barrel (pig) driven by compressed air to remove internal pipe debris prior to placing the main in service. The Subcontractor shall also furnish the pig in a new or near-new condition and all other necessary equipment for its operation. All these costs shall be included in the cost of the pipe installation.
    D. If deficiencies are found, they shall be corrected and re-tested as soon as possible. All work and material required to rectify the deficiencies shall be performed at no additional cost to the State.
20. **Installation of Gas Mains.** This work shall consist of all work required for the installation of gas mains. It also requires the work operations of both the Contractor and the Subcontractor. The Contractor shall coordinate all work directly with the gas Subcontractor. This work includes the Contractor sawcutting the existing bituminous and concrete pavements, breaking it out, and its removal. The Subcontractor shall excavate, lay the pipe, weld or fuse the pipe, install elbows and associated fittings and appurtenances, cathodic protection, test, and backfill with gas, excavation unclassified. When sufficient excavated materials are not available the Subcontractor shall provide and install gas, backfill. The Contractor shall construct a temporary riding pavement, final pavement, or a landscaped surface as required. This work may also include any sheeting associated with laying the pipe to be provided by the Subcontractor. PSE&G shall install the tie-in pieces as called for in the plans.
    A. Installation of the pipe shall conform to Section 602 where applicable and the Contract Document.
    B. All pipe shall be installed at the nominal cover of 36 inches, except when crossing drains, culverts, etc. as shown on the Plans or as field conditions permit. Except for the placement of sand 6 inches below and 12 inches above the main, the trench shall be backfilled with excavated material. The use of quarry process stone or additional sand may be approved at the direction of the PSE&G inspector. Backfill

shall be well compacted under and around the sides of the pipe, and thereafter in 6-inch lifts. Excess soil must be removed and disposed of at the Contractor's expense.

C. It shall be the responsibility of the Subcontractor to ensure the gas mains are installed within the established boundaries as shown on the Plans or as revised based on the test pit results. However, the Contractor is responsible for construction layout.

D. Insulating joints, valves, valve risers, miscellaneous fittings, locating wire, pipeline markers, test stations, and/or any other necessary appurtenances shall be installed as directed by PSE&G in coordination with the Engineer and shall be incorporated into the price bid for the various items for gas pipe installation noted below. There shall be no additional compensation for this work.

E. Cathodic protection on steel pipes shall be installed as shown on the Contract Plans. This includes pipe coating, anodes or rectifiers, insulating joints, and test stations. The Subcontractor shall install the anodes at a lower elevation than the pipe (in or below the water table where possible) and anodes shall be offset as far as practical from the pipe. The anode shall not be placed so that some other metallic structure, such as conduit, cable, pipe, etc., is between the main and the anode. Backfill shall be the existing soil tamped into position around the anode. The Subcontractor shall not backfill around the anodes installed with sand padding that may be used in the main trench.

F. The open cut method for installing gas pipe within a casing shall consist of all work required for the installation of a steel gas casing and the steel gas main through the means of open cut trenching. This work includes excavation of the trench, installation of a steel casing, welding the steel casing, inserting a steel carrier pipe, and welding the steel carrier pipe. This work also includes sheeting and dewatering the trench, and sealing and venting the casing, and installation of spacers within the casing.

G. Jacking method for installing pipe shall consist of all work required for the installation of a steel gas main within a steel casing through the means of jacking and boring. This work includes excavating both a jacking and a receiving pit, jacking a steel casing, welding the steel casing, inserting a steel pipe, and welding the steel pipe. This also includes sheeting and dewatering the pits, sealing, and venting the casing. Jacking shall conform to Subsection 602.06.

21. Service Installations. The work associated with installing a gas service shall consist of all work required for the transfer/installation of a gas service, permanent or temporary. This work includes breaking out the existing pavement and its removal by the Contractor. The Subcontractor shall excavate the trench, lay the bedding, lay the pipe, fuse the pipe, and assist PSE&G to tie into the main and backfill, including final restoration and landscaping outside the right-of-way. The Contractor shall provide a temporary riding pavement, final pavement, sidewalk or a landscaped surface as required inside the right-of-way. The Subcontractor shall also be required to perform all associated work with the transfer service. This work includes the excavation of one tie-in hole for direct burial and transfer installations and two tie-in holes for insert installations. Any additional excavation pits required for service installation work will be paid for on a cubic yard basis under the pay item gas, excavation unclassified.

A. Only the Subcontractor's personnel trained by PSE&G and carrying an up-to-date qualification card shall make fused or mechanical connections on plastic service pipe.

B. All service installations shall be ½ inch through 1 ½ inch plastic tubing and 2 inch, 3 inch, 3 inch, and 6 inch plastic pipe. The services shall be installed by either inserting plastic in the existing service or by directly burying plastic tubing/pipe. PSE&G shall witness and record the pressure testing of the services. The Contractor shall pressure test the service as required and soap test all fuses and mechanical connections.

C. The Subcontractor shall be responsible to perform all work associated with the service installation by using direct burial plastic pipe. This shall include, but is not limited to, the following steps:

1. Use pressure control equipment to shut the gas off at the service tee on the existing main prior to cutting the existing service pipe.
2. Disconnect the service pipe inside the building before the meter. Support the meter set to avoid stress on the house piping.
3. Excavate and install the replacement/new direct burial plastic service, including location wire, from the main to the building. This shall include a curb shut off behind the curb and a meter shut off at the head of the meter. Seal the hole in the foundation wall surrounding the service pipe with cement and/or water plug grout.
4. Electrofuse/weld the self-tapping tee to the new main and connect it to the new plastic service using Electrofuse/mechanical fittings.

5. Pressure test the service as required soap test all fuses and mechanical connections. When the air test is satisfactory, release pressure, tap self-tapping tee and gas out service through the hose from the meter shut off to the outside of the building until a 95% to 100% gas reading is obtained on a combustible gas indicator. Install tee cap and soap test.

D. The Subcontractor shall be responsible to perform all work associated with service installation by plastic insertion. Trenching or direct burial from the existing gas main to the point of insertion shall be paid for under the work performed for gas service insertion. This work shall include, but is not limited to, the following steps:
   1. Use pressure control equipment to shut the gas off at the service tee on the existing main prior to cutting the existing service pipe.
   2. Excavate and remove any curb shut off, offset, swing or service drip that may impede the insertion of the plastic pipe.
   3. Disconnect the service pipe inside the building before the meter. Support the meter set to avoid stress on the house piping.
   4. Ream the existing service, from the building to the main, with the appropriate sized reamer. Once the service is reamed, air blow the service from the house to the main.
   5. Insert the plastic tubing from main to the house or building receiving the service. This shall include the installation of a curb shut off and a meter shut off valve at the head of the service. The meter shut off valve shall be left in the open position with the plug installed.
   6. Electrofuse/weld the self-tapping tee to the new main and connect it to the new plastic service using Electrofuse/mechanical fittings.
   7. Pressure test the service as required and soap test all fuses and mechanical connections. When the air test is satisfactory, release pressure, tap self-tapping tee and gas out service through the hose from the meter shut off to the outside of the building until a 95% to 100% gas reading is obtained on a combustible gas indicator. Install tee cap and soap test.

E. The Subcontractor shall also be responsible to perform all work associated with the service transfer. This shall include, but is not limited to, the following steps:
   1. Use pressure control equipment to shut the gas off at the service tee on the existing main prior to cutting existing service pipe.
   2. Disconnect the service pipe inside the building before the meter. Support the meter set to avoid stress on the house piping. Install plug in meter shut off valve and leave valve open.
   3. Electrofuse/weld the self-tapping tee to the new main and connect it to the existing service using Electrofuse/mechanical fittings.
   4. Pressure test the service as required and soap test all fuses and mechanical connections. When the air test is satisfactory, release pressure, tap self-tapping tee and gas out service through the hose from the meter shut off to the outside of the building until a 95% to 100% gas reading is obtained on a combustible gas indicator. Install tee cap and soap test.

22. Steel Gas Pipe.

A. The steel pipe used for the installation shall be single and/or double random lengths. The Subcontractor is responsible for the adequate storage and protection of the pipe during construction.

B. All welding shall be performed in accordance with the latest edition of API Standard 1104, "Standard for Field Welding of Pipelines".

C. Before any pipe welding is performed, the Subcontractor shall submit a copy of the welders' Performance Qualification Record in accordance with API 1104 showing that the welders have been tested and approved by an authorized PSE&G representative. Welders previously qualified by test may be accepted without requalification subject to approval of the PSE&G inspector.

D. The Subcontractor shall utilize existing PSE&G Welding Procedures as detailed in the Gas Distribution Standards Manual.

E. PSE&G may require preheat of welding at any time because of atmospheric conditions, pipe chemistry, and/or sections of heavy wall thickness.

F. Tacking of ground clamps and other devices to the pipe is not permissible.

G. Arc burn damage to pipe parent material shall be ground smooth when the depth of the physical defect is no greater than 8% of the nominal wall thickness of the pipe.

H. When the depth of an arc burn physical defect is greater than 8% of the nominal wall thickness, the combination of physical and metallurgical defect shall be considered excessive and the defect and adjacent girth weld shall be removed from the pipeline at no cost to the State or PSE&G.

I. Welding repairs shall not be made on gouges, scratches, arc burns or other defects in the parent metal of the pipe. Field repair for gouges and grooves in the parent metal of the pipe may be made by grinding. The grinding shall not reduce the wall thickness at any point to less than 92% of the nominal wall thickness of the pipe.

J. A dent which contains a stress concentration, such as a scratch, gouge, groove or arc burn shall be removed by cutting out the damaged portion of the pipe.

K. A minimum of five percent (5%) of the joints will be x-rayed by PSE&G and one hundred percent (100%) of all joints of the carrier pipe will be x-rayed on all bridge crossings. Unacceptable welds shall be removed or repaired at the Contractor's expense. PSE&G will make the necessary arrangements with the Contractor to x-ray the joints. The Contractor shall provide adequate space to perform the testing at the site of all welding operations.

L. The Contractor's bid prices, provided by the Subcontractor, to install pipe shall also include costs to apply and/or repair pipe coating where necessary so that all pipe coatings pass the holiday detector test. The Subcontractor shall make provisions so the coating can be checked prior to lowering the new pipe section into the trench. Any damage to the pipe coating incurred during lowering shall be repaired by the Subcontractor at no additional cost to the State.

M. All field welds and fittings shall be sealed with Raychem Unisleeve or with a double layer of cold applied, 4-inch wide, corrosion protective tape in coordination with the Resident Engineer at the direction of PSE&G Raychem sleeves, primer and tape will be supplied by PSE&G.

N. The Subcontractor shall be paid for each additional weld that is required due to unanticipated alignment changes not identified on the Contract Plans as approved by the PSE&G inspector in coordination with the Engineer or his inspector.

23. Plastic Gas Pipe.

A. The Subcontractor shall have two qualified fusers (laborer, foreman, etc.) on the job site when installing plastic mains and/or plastic services. All fuses must be inspected by another qualified fuser who is not performing the fusing operation.

B. The plastic pipe supplied by PSE&G will be heat fusible, medium density, polyethylene PE-2406 Driscopipe or Plexcopipe. The Subcontractor's personnel fusing and inspecting butt fusion joints must be certified by PSE&G in accordance with the "Minimum Federal Safety Standards for Gas Lines", Part 192, TITLE 49, and must carry a fusion qualification card with them at all times. It shall be the Subcontractor's responsibility to supply the heat fusion equipment that has been inspected and certified by PSE&G before use.

C. Lengths of polyethylene pipe shall be adequately supported every ten feet during storage and while being transported to and from the jobsite.

D. The Subcontractor shall prefab steel by plastic transition fittings with an electric arc welder. Care must be taken to prevent excessive heat from being transmitted to the plastic portion of the fitting.

24. Gas, Pipe Excavation, Unclassified. Prior to the Subcontractor beginning their excavation the Contractor shall have completed the pavement sawcutting and pavement or sidewalk removal. The Subcontractor shall then perform excavation for gas pipes, valves, and appurtenances. The Subcontractor shall excavate for the trench and backfill to the bottom of the pavement box, sidewalk box or bottom of topsoil for work inside the right-of-way. The Contractor shall provide a temporary riding pavement, final pavement, sidewalk or a landscaped surface when the gas main is complete. The Subcontractor shall also provide sheeting as required. Dewatering shall be the responsibility of the Contractor.

25. Gas, Line Stop and Tie-in, Excavation, Unclassified.

A. Prior to the Subcontractor beginning their excavation the Contractor shall have completed the pavement sawcutting and pavement or sidewalk removal. The Subcontractor shall then perform excavation for pits required for line stop, flow stop, bypass, insertion, bagging and venting, hot taps, thrust restraint, purging and the tie-in. The Subcontractor shall excavate for the gas main or the pits and backfill to the bottom of the pavement box, sidewalk box or bottom of topsoil for work inside the right-of-way. The Contractor shall provide a temporary riding pavement, final pavement, sidewalk or a landscaped surface when gas main is complete and or the pit is no longer required. The Subcontractor shall also provide sheeting of the gas main trench or pits as required. PSE&G will perform line stop, flow stop, bagging and venting, hot taps, purging of the gas, and tie-in. The Subcontractor shall perform the thrust restraint and bell joint encapsulation work as required.

B. The excavation pits may be left open and/or plated as required, or until PSE&G has completed its work. A temporary skid resistant structural steel plate shall be used as required. This structural plate shall conform to the requirements of Subsection 917.10 of the Standard Specifications.

C. Line stop, bag and vent, and tie-in pits shall be made accessible for a period of several weeks for PSE&G or as directed based on field conditions.

26. Thrust Restraints and Bell Joint Encapsulations. Whenever excavation on a cast iron main system occurs, the use of thrust restraint devices and encapsulation devices is usually necessary. Thrust restraint and bell joint encapsulation pits shall be performed prior to excavating other pits. The number of devices is dependent upon field conditions and the location of the tie-in and live gas excavations. The final number and location of thrust restraint devices and encapsulation devices will be determined in the field by the Engineer as directed by PSE&G. The installation of a thrust restraint device and/or a bell joint encapsulation device shall include all work necessary to complete the installation including but not limited to the excavating and stockpiling of the soil, hand locating all underground facilities, installing the thrust restraint device and/or the encapsulation device, backfill the trench with the stockpiled material (dispose of any excess material) and tamping in 6-inch lifts. The Contractor shall be required to break and remove any existing pavement and restore the pavement with a temporary riding pavement or a landscaped surface as required. The Subcontractor shall be paid for as one unit no matter the amount of devices that are installed in each excavated pit.

27. Line Stop and Tie-in Assistance. Line stop assistance shall consist of the Subcontractor supplying labor and equipment necessary to perform the work and handle the pipe, in coordination with the Engineer, as specified by the PSE&G line stop specialists in performing the line stop and also by PSE&G for the tie-in.

A. Manpower/Equipment required for 2 inch thru 16 inch pipe:
one (1) Foreman, two (2) Laborers, one (1) Machine Operator, rubber tire backhoe

B. Manpower/Equipment required for 20 inch thru 42 inch pipe:
one (1) Foreman, three (3) Laborers, one (1) Machine and/or Crane Operator, track hoe Komatsu 230 or greater/4 ton Crane or greater.

28. Hot Tap Preparation. Hot Tap Preparation shall consist of the Subcontractor supplying labor and equipment to prepare the existing main for a hot tap that will be performed by PSE&G. This includes but is not limited to welding the spherical tee, three way tee, line stop fitting or other fitting on the existing steel main, installing the split sleeve collar, line stop fitting, or other fitting on the existing cast iron main. The Subcontractor shall notify the Contractor to notify the Engineer four weeks prior to welding the fitting so that PSE&G can supply an inspector and a qualified welder to oversee the welds. If PSE&G staff are not on site the work will not be approved.

29. Concrete Support Pad. The Subcontractor shall construct a Class B concrete pad under the pipe being worked on for the line stop in advance to the line stop crew's arrival. The concrete pad shall be constructed to the specifications of the specialized line stop crew. The Subcontractor shall also construct a concrete pad under valves as required to support the valve.

30. Fabrication of Tie-in Pieces. The Subcontractor shall be required to fabricate all tie-in pieces. This work includes measuring the existing pipe at the tie-in location and modifying a standard tie-in piece to fit connection requirements.

31. Gas, Protective Steel Plate. In areas where the existing gas main will remain in place or where adequate cover cannot be maintained over the proposed main as shown on the Plans or as determined by the Engineer and PSE&G inspector, the Subcontractor shall perform gas pipe, excavation unclassified to the top of the main and center such excavation based on the width of the proposed steel plate. The Subcontractor shall place 3 inches of gas, pipe bedding to the width and length called for on the Plans. The Subcontractor shall place the steel plates in 4-foot lengths and backfill with approved excavated materials from the excavation up to the bottom of the proposed pavement, sidewalk or in a landscape area the bottom of topsoil. The Contractor shall be responsible to restore the pavement, construct the sidewalk or place topsoil and fertilize and seed the area excavated.

32. Gas, Excavation for Test Pits. The Subcontractor shall excavate test pits around existing gas facilities to locate the gas facility or obtain the required information as directed by the Engineer. Gas excavation for test pits shall conform to Section 207. Excavation beyond that which is necessary to obtain the required information will not be measured for payment. The Subcontractor shall comply with the test pit requirements included in Section 105.09 and the Plans.

Method of Measurement.

Gas, line stop and tie-in, excavation, unclassified will be measured by the cubic meter in accordance with Subsection 202.14.

Gas pipe, excavation unclassified will be measured by the cubic meter in accordance with Subsection 202.14.

Gas main pipe of various sizes, installed depths, and type of material will be measured by the linear meter.

Casing and gas main, jack and bore casing and gas mains of the various sizes will be measured by the linear meter.

Plastic gas service insertion of the various sizes will be measured by the unit.

Plastic gas service direct burial of the various sizes that are thirty meters in length or under will be measured by the unit.

Plastic gas service direct burial of the various sizes that are over thirty meters in length will be measured by the linear meter.

Plastic gas service transfer of the various sizes will be measured by the unit.

Additional welds of the various sizes will be measured by the unit.

Excavation for line stop and tie-in pits will be measured by the cubic meter under the Pay Item "Gas, Excavation, Unclassified."

Line stop and tie-in assistance of the various sizes will be measured by the crew-hour. (Time will be measured by the Engineer.)

Hot tap preparation will be measured by the unit.

Line stop and valve concrete support pad will be measured by the cubic meter.

Fabricate tie-in pieces of the various sizes will be measured by the unit.

Plastic gas service pipe of the various sizes will be measured by the unit.

Thrust restraint and bell joint encapsulation of the various sizes will be measured by the unit.

Gas, excavation for test pits will be measured by the cubic meter.

Gas, pipe bedding will be measured by the cubic meter.

Gas, broken stone or washed gravel will be measured by the cubic meter.

Gas, coarse aggregate, size no. 57 will be measured by the cubic meter.

Gas, backfill will be measured by the cubic meter.

Gas, protective steel plate of the various sizes and thickness will be measured by the square meter.

Basis of Payment.

Payment will be made under:

Pay Item	*Pay Unit*
___ " PLASTIC GAS MAIN	LINEAR FOOT
___ " - ___ " PLASTIC GAS SERVICE INSERTION	UNIT
___ " - ___ " PLASTIC GAS SERVICE DIRECT BURIAL	UNIT
___ " PLASTIC GAS SERVICE DIRECT BURIAL	UNIT
___ " - ___ " PLASTIC GAS SERVICE TRANSFER	UNIT
___ " PLASTIC GAS SERVICE TRANSFER	UNIT
LINE STOP TIE-IN ASSISTANCE	CREW-HOUR
HOT TAP PREPARATION	UNIT
LINE STOP AND VALVE CONCRETE SUPPORT PAD	CUBIC YARD
___ " FABRICATE TIE-IN PIECE	UNIT
___ " THRUST RESTRAINT AND BELL JOINT ENCAPSULATION	UNIT
GAS PIPE, EXCAVATION, UNCLASSIFIED	CUBIC YARD
GAS, LINESTOP AND TIE-IN, EXCAVATION, UNCLASSIFIED	CUBIC YARD
GAS, EXCAVATION FOR TEST PITS	CUBIC YARD
GAS, PIPE BEDDING	CUBIC YARD
GAS, BROKEN STONE OR WASHED GRAVEL	CUBIC YARD
GAS, COARSE AGGREGATE	CUBIC YARD
GAS, BACKFILL	CUBIC YARD
GAS, PROTECTIVE STEEL PLATE	SQUARE FOOT
GAS, EXCAVATION ROCK	CUBIC YARD

Separate payment will be made to the Contractor for construction layout, traffic control, sawcutting, pavement removal, dewatering, final pavement, sidewalk or landscape restoration under the items for that work and all such costs shall be included in the various bid items for such related work contained in the Proposal.

Separate payment will not be made to the Contractor for the removal of excess gas, excavation unclassified or, temporary pavement and its removal and all such costs for this work shall be included in the various bid items contained in the Proposal.

Separate payment will not be made to the Subcontractor for backfilling with the materials removed by gas pipe, excavation, unclassified and/or gas, line stop and tie-in, excavation, unclassified. Payment will be made to the Subcontractor for gas, backfill as provided in the Proposal. All work shall be done in conformance with Section 207.

Separate payment will not be made to the Subcontractor for supplying the necessary small fittings, valves, hoses, pipe, etc. to connect the test equipment for Pressure (Air) Test and to perform the test itself.

Separate payment will not be made to the Subcontractor for temporary sheeting gas excavation trenches or tie-in pits and all costs shall be included in the various gas items contained in the Proposal.

Separate payment will not be made to the Subcontractor for temporary fencing or temporary steel plates to keep trenches open overnight and all costs shall be included in various gas items contained in the Proposal.

Separate payment will not be made to the Subcontractor for restoring areas outside the right-of-way line that are impacted by their operations.

DIVISION 700 - ELECTRICAL

SECTION 701 – COMMON PROVISIONS

701.01 Description
THE FIRST SENTENCE IS CHANGED TO:

These provisions are common to all work specified in Division 700.

701.02 Materials and Equipment.
THE WEBSITE IN THE LAST PARAGRAPH IS CHANGED TO:
http://www.state.nj.us/transportation/eng/

701.03 Existing Systems.
THE LAST PARAGRAPH IS CHANGED TO:

Before starting work on existing electrical facilities, the Contractor shall provide notification as specified in Subsection 105.09 and arrange a meeting with the Department if requested to verify the proper operation of the existing facilities. The Contractor shall document the resolutions of any meetings and forward a written summary to the Resident Engineer and all attendees.

701.04 Working Drawings.
THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Furnish, as specified in Subsection 105.04, certified working drawings for all non pre-approved electrical materials and equipment, and approved working drawings as specified. The Department will allow the use of pre-approved materials provided the materials meet all requirements of the Contract. The current pre-approved materials list is available on the web site specified in Subsection 701.02. The Contractor shall submit a list of all pre-approved materials to be used for the duration of the Project with the initial Materials Questionnaire Forms as specified in Subsection 106.01.

As specified in Subsection 701.10, approval of the working drawings for the precast foundations or junction boxes shall only apply to the locations designated.

Other certified or approval working drawings shall be submitted as specified.

DIVISION 800 – LANDSCAPING

SECTION 808 - FERTILIZING AND SEEDING

808.05 Basis of Payment.
THE SECOND PARAGRAPH IS CHANGED TO:

Payment will not be made for areas of fertilizing and seeding disturbed by Construction Operations, beyond the prescribed grading limits in islands and medians, and between prescribed grading limits and the right-of-way line, except as follows:

all areas within the right-of-way limits approved for storage of topsoil.

DIVISION 900 - MATERIALS

SECTION 901 - AGGREGATES

901.08 Dense-Graded Aggregate.

C. Production from Mixture with RAP.

6.

THE SECOND SENTENCE IS CHANGED TO:

When AASHTO T 310 (Direct Transmission Method, nuclear gauge method for measuring density and moisture content) is used to perform Compaction Acceptance Testing (Subsection 301.05, Subpart 2), a representative sample of five tests for each 5,000 square yards lot will be taken.

901.12 Aggregates for Portland Cement Concrete, Mortar, and Grout.

A. Coarse Aggregate.

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Coarse aggregate shall be broken stone or washed gravel conforming to Subsection 901.04 or 901.05 respectively except that carbonate rock shall not be used for concrete surface courses or bridge decks.

SECTION 902 - BEAM GUIDE RAIL

902.02 Posts and Spacers.

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Suppliers for obtaining recycled/synthetic routed spacers will be identified in the Standard Input. According to the provisions of 105.04, the Working Drawing submission shall provide evidence that the spacers that are to be used do satisfy the above criteria. Steel spacers shall conform to AASHTO M 270 Grade 36 and shall be galvanized according to AASHTO M 111. Steel pipe spacers shall be schedule 40 galvanized pipe.

Wood timber spacers and posts shall conform to Subsection 918.01.

Steel posts shall be structural steel that conforms to AASHTO M 270 Grade 36 and shall be galvanized according to AASHTO M 111.

To verify suppliers for obtaining recycled/synthetic routed spacers (Polymer & Composite Blockouts), the Contractor is advised to study the “Bureau of Material’s Approved List” on the following NJDOT website:

http://www.state.nj.us/transportation/eng/technology/materials

SECTION 904 – BITUMINOUS MATERIALS

904.01 Asphalt Binder.

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Asphalt binder shall conform to AASHTO M320, “Performance-Graded Asphalt Binder”.

904.06 Temperature-Volume Correction Factors.

SUBSECTION IS CHANGED TO:

Temperature-volume correction factors that shall be used to convert the volume of bituminous materials, measured at the temperature at the point of use, to the volume at 60 ºF are found in the following tables:

Table 904-1 Temperature-Volume Correction Factors for Bituminous Materials

Asphalt Binder, All Grades.
Cut-Back Asphalt, Grades RC-800, RC-3000, MC-800, and MC-3000.
Inverted Emulsified Asphalt, Grade IEMC-800.

http://www.state.nj.us/transportation/cpm/BaselineDocuments/

SECTION 905 - CONCRETE ADMIXTURES AND CURING MATERIALS

905.02 Chemical Admixtures.

THE THIRD PARAGRAPH IS CHANGED TO:

With the exception of chemical admixtures used in concrete base course, chemical admixtures used in concrete shall contain no calcium chlorides or any other intentionally added chlorides that may initiate or promote corrosion of reinforcement steel.

THE FOLLOWING SUBSECTION IS ADDED:

905.06 Detectable Warning Surfaces.

Materials for Detectable Warning Surfaces shall be safety red and appear uniform in color after curing. The surface coating material shall be an abrasion, UV and chemical resistant and shall be capable of adhering to existing or new portland cement concrete surfaces. The minimum final dry coat thickness shall be 40 mils.

The cured coating shall exhibit the following minimum coefficients of friction when tested according to ASTM D 1894.

Static coefficient of friction	**Dynamic coefficient of friction**
Dry 0.95 – 0.99	Dry 0.91 – 0.95
Wet 1.39 – 1.42	Wet 1.27 – 1.36

The Detectable Warning Surfaces shall be installed according to the manufacturer's recommendations.

SECTION 908 – JOINT MATERIALS

908.02 Joint Sealers.

THE FIRST PARAGRAPH IS CHANGED TO:

Hot-poured joint sealer for joints and cracks in both HMA and portland cement concrete surface course shall be sealant conforming to Subsections 908.06, 908.07, and ASTM D 6690 as follows:

1. Type II Sealant shall be used when sealing cracks in HMA.
2. Type IV Sealant shall be used when sealing joints and cracks in Portland cement concrete pavements and HMA saw and seal applications.

THE FOLLOWING NEW SUBSECTION IS ADDED:

908.08 Polymerized Joint Adhesive.

Polymerized joint adhesive shall be hot-applied asphaltic joint adhesive/sealer and shall conform to the physical properties in Table 908-6 below.

Table 908-6 Tests for Identification

Property	**ASTM Test Procedure**	**Physical Requirements**
Brookfield Viscosity, 400ºF	D 2669	3,000 – 10,000 cp
Cone Penetration, 77ºF	D 5329	60-100
Flow, 140ºF	D 5329	1/4 inch maximum

Resilience, 77ºF	D 5329	30% minimum
Ductility, 77ºF	D 113	1 foot minimum
Ductility, 39.2ºF	D 113	1 foot minimum
Tensile Adhesion, 77ºF	D 5329	500% minimum
Softening Point	D 36	170ºF minimum
Asphalt Compatibility	D 5329	Pass

The manufacturer of the joint adhesive shall provide documentation of recommended pour temperature and safe heating temperature for the material and shall submit certifications of compliance according to Subsection106.04.

SECTION 909 – LANDSCAPING MATERIALS

909.10 Topsoil.

A. Unacceptable Topsoil Sources.

ITEM 1. IS CHANGED TO:

1. Soils having less than 4.1 pH value, or greater than 8.0 pH value.

SECTION 912 - PAINTS, COATINGS, AND MARKINGS

912.10 Pavements Stripes or Markings.

C. Thermoplastic.

THE SECOND AND THIRD SUBPARTS ARE CHANGED TO:

2. For white, the composition of the mixture shall be as follows:

Component	**Percent by weight**
Resin/Binder	22-26 percent
Glass Beads (pre-mix)	30 percent minimum
WhitePigment	10 percent minimum
Calcium Carbonate and Inert Fillers (shall not contain silica other than as glass beads)	34-38 percent

3. Only yellow non-lead formulas shall be used, the composition of the mixture shall be as follows:

Component	**Percent by weight**
Resin/Binder	22-26 percent
Glass Beads (pre-mix)	30 percent minimum
Yellow Pigment	2 percent minimum
Calcium Carbonate and Inert Fillers (shall not contain silica other than as glass beads)	42-46 percent

The yellow material's combined totals of lead, cadmium, mercury, and hexavalent chromium shall not exceed 100 parts per million.

The thermoplastic manufacturer shall certify, according to Subsection 106.04, that the material will meet the requirements specified.

THE FOLLOWING IS ADDED TO THE END OF LIST:

D. Preformed Traffic Tape. Preformed traffic tape for permanent and temporary applications shall be from the NJDOT approved products list maintained by the Bureau of Materials Engineering and Testing.

912.12 Removable Pavement Marking Tape and Removable Black Line Masking Tape.

THE SUBSECTION HEADING AND SUBPART A IS CHANGED TO:

912.12 Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape.

A. Removable Wet Weather Pavement Marking Tape. The removable wet weather pavement marking tape shall consist of polymeric, conformable backing materials with a retroreflective surface designed to provide retroreflectivity in wet conditions. The underside of the tape shall be precoated with a pressure sensitive adhesive which bonds the tape to the roadway surface so as to be able to withstand traffic immediately after

installation. Primers shall be used to promote tape adhesion to the pavement only in accordance with the tape manufacturers recommendations.

Daylight color of the white tape shall be no darker than color No. 37778 of FED-STD-595B. Daylight color of the yellow tape shall conform to the FHWA color tolerance chart for highway yellow.

THE THIRD PARAGRAPH IS CHANGED TO:

When measured with a LTL-2000 Retrometer, the tape shall have initial, minimum retroflectance values conforming to:

Dry Condition – ASTM E 1710
Entrance Angle = 88.76°

Observation Angle	**Specific Luminance**	
	White	**Yellow**
(Degrees)	(Millicandelas per square foot per footcandle)	(Millicandelas per square foot per footcandle)
1.05	750	450

Note: The angular aperture of both the photoreceptor and the light projector shall be six minutes of arc. The reference axis shall be taken perpendicular to the test sample.

Continuous Wet Condition – ASTM E 2176
Entrance Angle = 88.76°

Observation Angle	**Specific Luminance**	
	White	**Yellow**
(Degrees)	(Millicandelas per square foot per footcandle)	(Millicandelas per square foot per footcandle)
1.05	750	350

The removable tape shall be capable of being removed manually, intact or in large pieces, at temperatures above 40 °F without the use of solvents, burning, grinding, or blasting. Only tape that has previously received the approval of the Department Bureau of Materials shall be used. Certification of Compliance shall be furnished according to Subsection 106.04.

SECTION 913 - PIPE

913.03 Ductile Iron Water Pipe.
THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Ductile iron water pipe shall conform to ANSI/AWWA C151/A21.51.

SECTION 914 – PORTLAND CEMENT CONCRETE, MORTAR, AND GROUT

THE TITLE OF THIS SECTION IS CHANGED TO:

SECTION 914 – PORTLAND OR BLENDED HYDRAULIC CEMENT CONCRETE, MORTAR, AND GROUT

914.01 Composition of Portland Cement Concrete.
THE TITLE AND SUBSECTION ARE CHANGED TO:

914.01 Composition of Portland or Blended Hydraulic Cement Concrete.

Portland cement concrete shall be composed of portland cement or blended hydraulic cement, coarse aggregate, fine aggregate, admixtures, and water. Portland cement concrete except white concrete may include fly ash, Ground Granulated Blast Furnace Slag or Silica Fume. Materials shall conform to the following Subsections:

Aggregates	901.12
Admixtures:	
Air-Entraining	905.01
Chemical	905.02
Mineral:	
Fly Ash	919.07
Silica Fume	919.10(b)
Ground Granulated Blast Furnace Slag	919.18
Portland Cement	919.11
Water	919.15

Chemical admixtures conforming to the requirements of Subsection 905.02 may be used in the mix design of structural concrete items.

914.02 Portland Cement Concrete Design, Control, and Acceptance Testing Requirements.
THE TITLE OF THIS SUBSECTION IS CHANGED TO:

914.02 Portland or Blended Hydraulic Cement Concrete Design, Control, and Acceptance Testing Requirements.
THE LIST FOR THE SELECTED STRUCTURAL CONCRETE PAY ITEM ADJUSTMENT HAS BEEN CHANGED TO:

B. Proportioning and Verification.
THE SECOND SENTENCE OF THE THIRD PARAGRAPH IS CHANGED TO:

At least six 4 by 8 inch test cylinders shall be prepared from each batch and cured according to AASHTO T 23 or AASHTO T 126.

THE FIRST SENTENCE OF THE TENTH PARAGRAPH IS CHANGED TO:

Classes A and B concrete may be designed to achieve early strength requirements by increasing the Cement content.

C. Acceptance Testing Procedures for Slump and Air Entrainment.
THE FIRST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

Following any permitted additions, the drum shall be rotated at the recommended mixing speed for a minimum of 30 revolutions without exceeding 300 total revolutions, the original test results shall be disregarded, and a single test for both slump and air entrainment performed.

D. General Acceptance Testing Requirements for Strength.
THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Concrete test specimens which are to be used for determination of early strengths for form removal, opening to traffic, or otherwise placing the concrete into service shall be cured according to the field curing provisions in AASHTO T 23.

F. Acceptance Testing for Strength for Non-Pay-Adjustment Items.
THE ENTIRE TEXT OF THIS SUBPART IS CHANGED TO:

All concrete items not specifically designated as pay-adjustment items as described in Subsection 914.02, Subpart E are considered to be non-pay-adjustment items, but may be accepted by pay-adjustment under certain circumstances. Such an item is eligible for 100 percent payment (PA = 0) provided the retest limit of Subsection 914.05, Table 914-4 is met. If this requirement is not met, the item will be treated as a

pay-adjustment item according to Subsection 914.02, Subpart E, and all pay-adjustment provisions shall apply except that the item bid price will be used instead of an item base price in the computation of the pay-adjustment.

When a pay-adjustment is computed for any of the following items, which are only partially composed of concrete, the amount of pay-adjustment, if any, will be multiplied by the Estimated Percentage of Concrete (expressed as a decimal) as indicated below:

Pay Item	**Estimate Percentage of Concrete**
INLETS, TYPE ___	30
INLETS, TYPE ___, USING EXISTING CASTING	30
INLETS, TYPE B-___	40
INLETS, TYPE B-___, USING EXISTING CASTING	40
INLETS, TYPE ___ MODIFIED	40
INLETS, TYPE ___ MODIFIED, USING EXISTING CASTING	40
INLETS, TYPE ES	50
INLET CASTINGS, TYPE ES	40
MANHOLES	30
MANHOLES, ___ ‘ DIAMETER	30
MANHOLES, USING EXISTING CASTING	30
MANHOLES, SANITARY SEWER	30
MANHOLES, SANITARY SEWER, USING EXISTING CASTING	30
GRANITE CURB	25
RESET GRANITE CURB	25
BEAM GUIDE RAIL ANCHORAGES	25
CHAIN-LINK FENCE, ___ ‘ HIGH	25
CHAIN-LINK FENCE, ALUMINUM-COATED STEEL,___ ‘ HIGH	25
CHAIN-LINK FENCE, PVC-COATED STEEL,___ ‘ HIGH	25
CHAIN-LINK FARM-TYPE FENCE	25
GATES, CHAIN-LINK FENCE, ___ ‘ WIDE	25
GATES, CHAIN-LINK FENCE, ALUMINUM-COATED STEEL, ___ ‘ WIDE	25
GATES, CHAIN-LINK FENCE, PVC-COATED STEEL, ___ ‘ WIDE	25
GATES, CHAIN-LINK FARM-TYPE FENCE, ___ ‘ WIDE	25
RESET FENCE	25
TEMPORARY CHAIN-LINK FENCE, ___ ‘ HIGH	25
GUIDE SIGNS, TYPE GA, BREAKAWAY SUPPORTS	20
GUIDE SIGNS, TYPE GA, NON-BREAKAWAY SUPPORTS	20

The amount of pay-adjustment for pay items not listed above is the product of the unit bid price times the lot quantity times the percent pay-adjustment given by Equation 1.

914.04 Sampling and Testing Methods.

THE FOLLOWING AASHTO TEST METHOD IS ADDED:

T303	Standard Test Method for Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction.

914.05 Tables.

TABLES 914-1, 914-3, AND 914-4 ARE CHANGED TO:

Table 914-1 Requirements for Roadway Concrete Items

	Concrete Class	Slump (inch)	Percent Air Entrainment for Coarse Aggregate Size Numbers				
			357	467	57	67	8
Cast-in-Place Items							
Surface Course, Bridge Approach Slabs, Bridge Approach Transition Slabs	B	2±1	5.0±1.5	5.0±1.5	6.0±1.5	6.0±1.5	7.0±1.5
Base Course	B	2±1	5.0±1.5	5.0±1.5	6.0±1.5	6.0±1.5	7.0±1.5
Inlet and Manhole Walls, Headwalls, Miscellaneous Concrete	B	3±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Inlet and Manhole Top Slabs, Sidewalks, Driveways, Islands	B	3±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Slope Gutters, Vertical Curb, Sloping Curb, Barrier Curb and Base	B	4±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Concrete and White Concrete Vertical, Sloping and Barrier Curb, Concrete and White Concrete Islands	B	4±1	----	----	7.0±2.0	7.0±2.0	8.0±2.0
Foundations for:							
Inlets and Manholes	B	3±1	6.5 max	6.5 max	7.5 max	7.5 max	8.5 max
Electrical Items	B	3±1	----	----	7.5 max	7.5 max	8.5 max
Signs	B	3±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Junction Boxes	B	3±1	----	----	7.5 max	7.5 max	8.5 max

Table 914-1 (Continued)

	Concrete Class	Slump (inch)	Percent Air Entrainment for Coarse Aggregate Size Numbers				
			357	**467**	**57**	**67**	**8**
Cast-in-Place Items (continued)							
Footings for Fence Posts, Guide Rail End Treatment	B	3±1	----	----	7.5 max	7.5 max	8.5 max
Culverts	A	3±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Monuments	A	3±1	----	----	7.5 max	7.5 max	8.5 max
Slope Protection	B	2±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Precast Items							
Culverts	A	3±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Inlets and Manholes, Junction Boxes, Headwalls, Reinforced Concrete End Sections (See note 2)	B	3±1	----	----	6.0±1.5	6.0±1.5	7.0±1.5
Concrete and White Concrete Barrier Curb	B	3±1	----	----	7.0±2.0	7.0±2.0	8.0±2.0

Note 1: According to Subsection 501.03, a Type F water-reducing, high range admixture will be permitted according to Subsection 905.02 and Subsection 914.02, Subparts B and C. When a Type F admixture is used, the table Slump and Air Content values for the given concrete item shall be changed as follows:

Slump: 6 ± 2 inches

Air Content: Increase both the target value and tolerance percentages by 0.5.

Note 2: For the items in this category, the slump may be reduced to zero (dry cast) provided that adequate consolidation, acceptable to the Engineer, is achieved.

Table 914-3 Mix Design Requirements

	Class of Concrete					
	A	**B**	**S**	**P**	**P-1**	**P-2**
Class Design Strength (28 days, psi Note 3)	4600	3700	2000	5500	6000	6500
Verification Strength (28 days, psi Note 3)	5400	4500	--	6000	6500	7000
Maximum Water/Cement Ratio (Note 2)						
lb/lb	0.443	0.488	0.577	Note 1	Note 1	Note 1
gals/bag	5.0	5.5	6.5	Note 1	Note 1	Note 1
Minimum Cement Content						
lb/cy	611	564	658	Note 1	Note 1	Note 1
Bags/cy	6.5	6.0	7.0	Note 1	Note 1	Note 1

Note 1: According to PCI Manual, except as indicated in Note 2.

Note 2: The maximum water/cement ratio for all classes of concrete except for Classes P, P-1 and P-2, when a Type F water-reducing, high range admixture is used according to Tables 914-1 and 914-2, shall be reduced by 0.043 lb/lb (4.5 gals/bag).

Note 3: All concrete test results shall be recorded to the nearest 10 psi.

Note 4: To successfully meet the requirements of this specification, the target production strength must be higher than the Class Design Strength by an amount proportional to the Producer's within-lot standard deviation.

Table 914-4 Lot Sizes, Sampling Rates and Retest Limits

	Class of Concrete					
	A	**B**	**S**	**P**	**P-1**	**P-2**
Lot Size (maximum)	One Day's Production			One Day's Production of a Single Steam Bed		
Pay-Adjustment Items						
Initial Sampling Rate	5/Lot	5/Lot	--	5/Lot	5/Lot	5/Lot
Retest Sampling Rate (minimum)	5/Lot	5/Lot	--	5/Unit or Load Test		
Non-Pay-Adjustment Items						
Initial Sampling Rate	3/Lot	2/Lot	1/Lot	3/Lot	3/Lot	3/Lot
Retest Limit (psi)	4400	3600	2000	5400	5900	6400
Retest Sampling Rate	5/Lot	5/Lot	5/Lot	5/Lot	5/Lot	5/Lot

Note 1: The lot sizes are maximums and, at the option of the Engineer, any lot may be subdivided into two or more smaller lots. When such a subdivision is made, the specified sampling rate applies to each of the smaller lots.

Note 2: An initial strength test result is defined as the average strength of two 4 inch by 8 inch compression test cylinders, cured for 28 days, and tested in the Department Laboratory except for Classes P, P-1, and P-2 cylinders which may be tested at the fabricator's plant under the supervision of the Engineer.

Note 3: A retest result is defined as the strength of an individual test result obtained by coring or other suitable means. If retest is performed by coring, each retest result is defined as the corresponding nominal core strength divided by 0.85.

Note 4: The specified sampling rates shall apply except that no more than one test per truckload or batch of concrete will be required (except for air and slump tests when retempering). It is expected that each structural component will have a representative sample taken. At the option of the Engineer, nonstructural concrete lots consisting of 20 cubic yards or less may be accepted without strength tests.

Note 5: No lot shall include more than one class of concrete nor include concrete of the same class having different specified levels of slump or air entrainment.

Note 6: For prestressed concrete, if more than one bed is used or if more than 80 cubic yards of concrete are used, the production shall be subdivided as equally as possible into two or more lots.

Note 7: Retest limit for non-pay-adjustment roadway and structural items requiring the use of Class B, white concrete, shall be 3000 psi.

SECTION 915 – REINFORCEMENT STEEL

915.02 Prestressing Reinforcement.

C. Grit Impregnated Epoxy-Coated Prestressing Steel.

THE FIRST SENTENCE IS CHANGED TO:

Grit impregnated epoxy-coated prestressing steel strands shall conform to the requirements of ASTM A 882 and to the criteria specified in 502.06.

SECTION 916 - SIGN MATERIALS

916.04 Retroreflective Sheeting.

THE ENTIRE SUBSECTION IS CHANGED TO:

As stated herein, the terms reflective sheeting and retroreflective sheeting are synonymous.

Retroreflective sheeting shall conform to ASTM D 4956 based upon results obtained and reported through testing performed by the National Transportation Product Evaluation Program (NTPEP).

Flourescent retroreflective sheeting shall be selected from the approved products list as provided in the Special Provisions.

Approved Products:

3M Co. LDP-3963 flourescent yellow-green (for school advanced-warning and non-motorized crossings only)
3M Co. VIP-3983 flourescent yellow-green (for school advanced-warning and non-motorized crossings only)

1. General Requirements.

a. Retroreflectance. All retroreflective sheeting shall have the minimum coefficient of retroreflection (R_A) in conformance with ASTM D 4956.

b. Color. The colors of the retroreflective sheeting, except for fluorescent colors shall conform the color requirements of ASTM D 4956.

c. Fluorescent Colors. The daytime fluorescent color of retroreflective sheeting shall be determined according to ASTM E 991.

In addition, the color shall be equally distinguishable in daylight and at night under artificial headlight illumination. The color shall have a consistent chromaticity across all signs of the same color. Noticeable deviation from the shades that would affect the required performance shall be a cause for rejection of any sheeting or completed sign at any time before acceptance. For sheeting that is directional, the datum mark (arrow) imprinted on the face of the sheeting shall be the datum mark for test purposes.

d. Product Performance Requirements. The retroreflective sheeting manufacturer shall meet the following requirements for their products.

(1) Type III Sheeting – Sheeting shall be required to have a service life span of at least 12 years.

(2) Types VI, VII, VIII AND IX Sheeting – Sheeting shall be required to have a service life span of at least 10 years.

(3) The performance requirements shall be such that there is: no loss of retroreflectivity; no loss of colorfastness; no cracking; and no other conditions inherent to the sheeting including inks and overlay film that causes it to be incapable of performing as required.

2. Certification of Compliance. The manufacturer shall submit a certification of compliance according to Subsection 106.04 for each lot of sheeting supplied for use on the Project.

916.05 Legends, Borders, and Accessories.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

All finished signs shall be clear and legible without smudging, blisters, delamination, loose edges or other blemishes.

1. Type A Demountable.

THE FIRST AND SECOND PARAGRAPHES ARE CHANGED TO:

The demountable sign letters, digits, arrows, borders, and alphabet accessories shall be reflectorized and shall consist of ASTM D 4956 Type VIII OR IX wide angle prismatic retroreflective sheeting applied to ⅜-inch cutout aluminum plates conforming to ASTM B 209, Alloy 6061-T6 or 5052.

All shields and symbols to be mounted to sign types GO, GOX, and GA on breakaway tubular posts shall consist of ASTM D 4956 Type VIII OR IX wide angle prismatic retroreflective sheeting applied to 3/16-inch cutout aluminum plates conforming to ASTM B 209, Alloy 6061-T6.

2. Type B Direct and Permanently Applied Retroreflective Sheeting Copy.

SUBPART D, E, & F ARE DELETED AND C IS CHANGED TO:

c. When the background is ASTM D 4956 Type III sheeting, ASTM D 4956 Type III sheeting shall be used for copy.

916.08 Fabrication.

8. Shop Painting and Reflectorization.

a. Application.

THE LAST SENTENCE IN THE THIRD PARAGRAPH IS CHANGED TO:

Sheeting applied to extruded sections shall extend over top edges and down side legs a minimum of 1/16 inch; except that where ASTM D 4956 Type VIII or IX sheeting is used, it shall be cut at the top edges according to the manufacturer's recommendation.

c. Screen Process Printing.

THE THIRD SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Transparent screen process paint, after application to the retroreflective sheeting and thoroughly dry shall conform to the color requirements ASTM D 4956.

9. Packaging, Storage, and Shipping.

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Packaging, storage, and shipping of signs produced using retroreflective sheeting shall be according to the sheeting manufacturer's recommendations.

916.10 Breakaway Steel "U" Post Sign Supports.

THE HEADING AND ENTIRE SUBSECTION TEXT IS CHANGED TO:

916.10 Steel "U" Post Sign Supports.

The steel "U" post sign supports shall conform to ASTM A499. Signs shall be secured to the steel "U" post by means of 18-8 stainless steel 5/16 x 18 UNC hexagonal headed bolts and nuts conforming to ASTM A 320, Grade B8, Class 1. Sign mounting bolts shall extend beyond the end of each nut but not more than ¾ inches when fully tightened.

The steel "U" posts shall be straight and have a smooth finish, free of burrs.

The list of the approved products will be provided by the Bureau of Materials Engineering and Testing.

916.14 Flexible Delineators.

2. Composition.

THE FIRST PARAGRAPH IS CHANGED TO:

For ground mounted flexible delineators, the portion of the delineator above ground shall be one component, or shall be bonded together if it consists of two or more components. The shape of the delineator post where the retroreflective sheeting is applied shall have a cross section that protects the sheeting from abrasion upon impact.

10. Mowability.

THE ENTIRE SUBPART IS DELETED.

11. Sampling Rate

THE SUBPART NUMBER IS CHANGED TO:

10. Sampling Rate.

916.17 Tables.

THE ENTIRE SUBSECTION IS DELETED.

SECTION 917 – STRUCTURAL STEEL AND OTHER FERROUS METALS

917.01 Bolts and Bolting Material.

2. Specifications.

THE FOLLOWING IS ADDED:

c. Direct Tension Indicators shall comply with ASTM F 959 and shall be accepted and installed according to Test Method S-3, "Procedure for Identification and Installation of High Strength Bolts with Direct Tension Indicators (DTI's)".

3. Manufacturing.

a. Bolts.

THE FIRST SENTENCE IS CHANGED TO:

Hardness for bolt diameters ¼ inch to 1 ½ inches, inclusive, shall be as noted:

THE FOLLOWING IS ADDED:

When atmospheric corrosion resistant weathering steel is to be used, Type 3 bolts shall be used.

THE FOLLOWING IS ADDED:

d. Direct Tension Indicators (DTI's). When galvanizing of the bolt assembly is required, DTI's shall be mechanically galvanized in accordance with AASHTO M 298, Class 50 (ASTM B 695, Class 50). DTI's to be used for Type 3 bolts shall be epoxy coated with a black color.

4. Testing.
THE FOLLOWING IS ADDED:

g. Direct Tension Indicators (DTI's). DTI's shall be tested according to ASTM F 959.

7. Installation.
THE SUBPART A. IS CHANGE TO:

a. Bolts shall be installed according to the appropriate AASHTO Specifications. Direct Tension Indicators (DTI's) shall be used with high strength bolts to verify the required tension. The provisions of Article 11.5.6.4.7 of Division II of the AASHTO Standard Specifications or of Article 11.5.6.4.7 of the AASHTO LRFD Bridge Construction Specifications shall be followed. If warranted and as directed by the Engineer, the face of the nut shall be smeared with wax before it is installed. The Castral Stick Wax lubricant, beeswax or a water wax emulsion; such as, the MacDermid "Torque 'N Tension Control Fluid" may be used.

THE FOLLOWING IS ADDED AT THE END OF THE SUBSECTION:

Anchor bolts, rock anchors, and hardware shall conform to AASHTO M 270 Grade 36 and shall be galvanized after fabrication, including threading, according to ASTM A 153.

Dowels used to anchor prestressed concrete voided slabs and box beams to abutments and piers shall conform to AASHTO M 270 Grade 36 and shall be galvanized to ASTM A 153. Threading of dowels is not required.

Welded steel shear connectors shall conform to Division II, Section 11 of the AASHTO Standard Specifications for Highway Bridges or Section 11 of the AASHTO LRFD Bridge Construction Specifications.

Stainless steel bolts, nuts, and washers shall conform to ASTM A 320, Class 1, Grade B8 (AISI Type 304).

For overhead and cantilever sign support structures, bolts, nuts and washers for steel to steel chord splices shall conform to AASHTO M 164 and be hot-dip galvanized as per ASTM A 153.

As an alternate, bolts, nuts and washers conforming to AASHTO M 164 may be substituted for bolts, nuts, and washers of the same diameter, length, and thickness conforming to ASTM A 307.

917.03 Castings, Materials and Components for Drainage Structures.
THE FIRST PARAGRAPH IS CHANGED TO:

All castings, grates, extension rings, extension frames and covers for drainage structures shall be capable of withstanding the proof load testing requirements specified in AASHTO M 306 when they are tested as a complete assembled unit and shall conform to the following:

SECTION 919 - MISCELLANEOUS

919.07 Fly Ash.
THE FIRST PARAGRAPH IS CHANGED TO:

Fly ash for portland cement concrete shall conform to ASTM C 618, Class C or Class F except that the loss on ignition shall not be more than three percent. Fly ash used to control alkali-silica reactivity shall be Class F. Before each source of fly ash is approved, certified results of tests conducted by a testing agency shall be submitted to and verified by the Department. Accompanying the certification shall be a statement from the supplier listing the source and type of coal, the methods used to burn, collect, and store the fly ash, and the quality control measures employed.

919.11 Portland Cement.
THE TITLE AND SUBSECTION ARE CHANGED TO:

919.11 Portland or Blended Hydraulic Cement.

Portland cement shall conform to the following:

Masonry Cement	ASTM C 91
Portland Cement, Type I, II, and Type III (see Note 1)	ASTM C 150
White Portland Cement, Type I and III (see Note 2)	ASTM C 150
Blended Hydraulic Cement (see Note 3)	ASTM C 595

Note 1: Type III may be used only for prestressed or precast items.

Note 2: Shall not contain more than 0.55 percent by weight of ferric oxide (Fe_2O_3).

Note 3: Only types IS, I(PM), and I(SM) may be used. Portland cement, may be pre-blended with a maximum of 15 percent fly ash, by weight, or a maximum of 10 % silica fume by weight, or with a maximum of 50% GGBFS by weight. If more than 30% GGBFS is used, a scaling test conforming to ASTM C 672 must be completed on the mix design and the concrete must have a visual rating less than 3 as based on ASTM C672 10.1.5 after 50 cycles.

When blended portland cement is used, no additional mineral admixtures shall be added.

Different brands of cement, the same brand of cement from different mills or different types of cement shall not be mixed.

Suitable means shall be provided for storing and protecting the cement against dampness. Cement which for any reason has become partially set or which contains lumps of caked cement will be rejected. The temperature of the cement at the time of delivery to the mixer shall not exceed 160 °F.

919.18 Ground, Granulated Blast Furnace Slag.

THE SECOND PARAGRAPH IS CHANGED TO:

Ground, granulated blast furnace slag may be used as a replacement for portland cement as specified in Subsection 919.11 up to a maximum replacement level of 50 percent by weight. Replacement of portland cement greater than 30 percent will require a scaling test on the mix design conforming to ASTM C 672 with a visual rating less than 3.

919.19 Sampling and Testing Methods

THE FOLLOWING ARE ADDED:

Mineral Admixtures	8 pounds from each source
Blended Hydraulic Cement	ASTM C 595

THE FOLLOWING NEW SUBSECTION IS ADDED:

919.22 Controlled Low Strength Material (CLSM).

CLSM shall conform to the following:

Fine Aggregate	901.12
Chemical Admixtures	905.02
Portland Cement, Type I, II, III	919.11
Water	919.15

CLSM shall consist of a mixture of portland cement, water, fine aggregate and chemical admixtures. Fly ash shall not be permitted in mixes intended for trench backfilling. The CLSM mixture shall be proportioned to provide a backfill material that is self-compacting and capable of being excavated with hand tools at a later date. CLSM shall be proportioned to produce a 28-day compressive strength of 50 to 150 pounds per square inch. An accelerating admixture shall be used to produce a fast setting flowable mixture as required. The CLSM shall have a permeability of $1.7 \times 10^{-3} \pm 0.2 \times 10^{-3}$ centimeters per second according to ASTM D5084 for backfilling of conduits and piping.

At least 45 days prior to the start of any CLSM placement, trial batches of CLSM shall be prepared of the same materials and proportions proposed for use on the project. Each mix design shall be submitted on portland cement concrete mix design forms furnished by the Department, naming the sources of materials and test data.

Department personnel will be present at the time of verification batching to confirm that the proportions and materials batched are according to the proposed mix designs. At least six 6 X 12 inch compression test cylinders shall be prepared for each batch according to ASTM 5971-96 for 28-day strengths except for fast setting mixes, which shall be tested at the specified cure time.