

SPECIAL PROVISIONS
ROUTE I-78 LOCAL AND EXPRESS
ROADWAY IMPROVEMENTS
CONTRACT "A" FROM M.P. 50.59 - M.P. 52.80
UNION TOWNSHIP, UNION COUNTY
FEDERAL PROJECT NUMBER IM-078-5(087)

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 105 inclusive for General, Road, and Bridge Provisions.

Required Contract Provisions, Federal-Aid Construction Contracts (Form FHWA-1273) pages 1 to 10 inclusive, revised March 1994.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246), pages 1 to 5 inclusive, dated December 1980, revised April 1984.

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), pages 1 and 2, dated December 1980, revised April 1984.

State of New Jersey Equal Employment Opportunity for Contracts Funded by FHWA, page 1, dated November 1978, revised April 1984.

Emerging Small Business Enterprise Utilization Attachment, FHWA Funded Contracts, pages 1 to 7 inclusive, dated March 2001.

Equal Employment Opportunity Special Provisions, pages 1 to 11 inclusive, dated February 1976, revised April 1984, November 22, 1988, and March 1998.

Special Contract Provisions for Investigating, Reporting, and Resolving Employment Discrimination and Sexual Harassment Complaints, pages 1 and 2 inclusive, dated January 1989.

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Davis-Bacon web site at <http://www.access.gpo.gov/davisbacon/nj.html> under the appropriate county, select the construction type heading: HIGHWAY.

The Contractor shall pay the minimum wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the minimum wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the minimum wage rate prescribed for that craft by the New Jersey Department of Labor, the higher rate shall be the rate paid.

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

101.01 General.

THE FOLLOWING IS ADDED:

Pursuant to NJSA 27:1B-21.6 and USC (United States Code) Section 115, the Commissioner intends to enter into an advanced construction contract for the advancement of the Project. Although the advanced construction contract will pledge funds anticipated to be appropriated for the Project by the Legislature, payment of the moneys pledged is subject to the availability of funds in the fiscal year (FY) in which the funds are to be appropriated. Only amounts appropriated by law may be expended.

The Commissioner intends to proceed expeditiously with the Project. However, there is no assurance that the Annual Appropriations Act will contain an appropriation or that the Federal Government will approve or provide federal funding for the Project. The Legislature has no legal obligation to make such an appropriation. Failure by the Legislature to appropriate funds or failure by the Federal Government to approve or provide federal funding sufficient to advance the Project will not constitute a default under, or breach of, any contract entered into by the State for the construction of the Project. However, if the State terminates the Contract or suspends work under the Contract because the Legislature has failed to appropriate or the Federal Government has failed to provide or approve sufficient funding to advance the Project, the parties to the Contract will retain their rights pursuant to the suspension of work and termination of Contract Provisions of the Project specifications; except as indicated below.

The Contractor shall not expend or cause to be expended any sum in excess of the amount allocated in the current fiscal year's Capital Program (as specified below). The Department will notify the Contractor when each level of additional funding has been appropriated by the Legislature or approved or provided by the Federal Government. Any expenditure by the contractor which exceeds the amount actually appropriated or exceeds the amount of approved federal funding is at the Contractor's risk and the Contractor waives any right to recover any sum in excess of that appropriated amount or the amount approved or provided by the Federal Government even if the State terminates or suspends work under the Contract because the Legislature has failed to appropriate or the Federal Government has not provided or approved sufficient funds to advance the Project.

The approved 2006 Capital Program has an item with \$13.5 million for the construction of the Project.

It is further anticipated that the balance of the funds necessary to complete the Project will be provided during State FY07.

It should be noted that the Federal FY begins October 1 of the previous calendar year and that the State FY begins July 1 of the previous calendar each year.

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.

BID: The term "Bid" means the offer of a bidder, properly signed and guaranteed, on the prepared form furnished by the Department, or printed from the Computer Disk, to perform the Work at the prices therein.

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 THIRD ITEM LISTED UNDER THE TERM "COMPLETION" IS CHANGED TO:

3. the Contractor has satisfactorily executed and delivered to the Engineer all documents, which is to include the federal form FHWA-47 "Contractor's Statement of Materials and Labor" according to 23CFR 635, for Federal Funded Projects, certifications, and proofs of compliance required by the Contract Documents, it being understood that the satisfactory execution and delivery of said documents, certificates, and proofs of compliance is a requirement of the Contract.

THE FOLLOWING TERMS ARE CHANGED:

ADDENDA (Addenda or Addendum used interchangeably). The term "Addenda" means the written, graphic, or electronic information issued before the opening of bids that clarify, correct, or change the Contract Documents.

COMPUTER DISK. The term "Computer Disk" means a diskette or CD-ROM that contains Expedite software Electronic Bidding System (EBS) file. This Computer Disk will produce a Proposal Form. The Computer Disk shall be used to prepare and print the Proposal Form.

The following is a listing of the microcomputer system equipment necessary to properly run the EBS program:

1. Personal computer with at least a 2.5 GHz processor.
2. Floppy diskette drive or CD-ROM optical drive
3. 512-MB RAM
4. 10 GB available hard disk space
5. Microsoft Windows XP or Windows 2000 operating system
6. Laser Jet or Ink Jet printer

The Department assumes no responsibility for the use of the Computer Disk. The Department will not be liable for any losses, damages, or problems that may arise from the use of the Computer Disk by the Contractor,

even if such problems result in the rejection of the Contractor's bid. The Department will not be responsible for any bid item spreadsheet program on the Computer Disk that is not compatible with the Contractor's computer equipment or software. All liability for any damages caused by the use of the Computer Disk shall be borne by the Contractor. The ultimate responsibility for the accuracy of the Contractor's bid remains with the Contractor. Furthermore, the Department will not be held responsible for the loss of or damage to any Computer Disk after the Contractor takes possession of it or it is mailed to the Contractor. If any Computer Disk is lost or damaged, the Contractor may purchase another Computer Disk.

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.

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:

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: 609-530-2499 (Warren Howard)
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

THE ENTIRE SECTION IS CHANGED TO:

ROUTE I-78 LOCAL AND EXPRESS - CONTRACT A
CONTRACT NO. 050003731
UNION TOWNSHIP, UNION COUNTY

102.01 Prequalification of Prospective Bidders.

THE ENTIRE SUBSECTION IS CHANGED TO:

Bids will be received only from Bidders who, 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.* and who at the time of delivery of bid have effective prequalification ratings of not less than the amounts of their respective bids.

Additionally, for wholly State-funded contracts, bidders must be registered with the New Jersey Department of Labor, Division of Wage and Hour Compliance, at the time of bid pursuant to the "Public Works Contractor Registration Act," N.J.S.A. 34:11-56.48 et seq. (P.L. 2003, c. 91.) This requirement for registration at the time of bid does not apply to FHWA funded projects.

102.02 Disqualification of Prequalified Prospective Bidders.

The Department reserves the right to disqualify or refuse to receive a bid from a prospective Bidder even though prequalified as required by [Subsection 102.01](#) for any of the following reasons:

1. Lack of competency or lack of adequate machinery, plant, or other equipment.
2. Uncompleted work that, in the judgment of the Department, might hinder or prevent the prompt completion of additional work, if awarded.
3. Failure to pay, or satisfactorily settle, all bills due for labor, equipment, or material on previous Contracts.
4. Failure to comply with any prequalification regulations of the Department.
5. Default under any previous contract.
6. Unsatisfactory performance on previous or current contracts.
7. Questionable moral integrity as determined by the Attorney General of New Jersey or the Commissioner.
8. Failure to reimburse the State for monies owed on any previously awarded contracts including those where the prospective Bidder is a party to a joint venture and the joint venture has failed to reimburse the State for monies owed.
9. Documented failure to comply with the conditions of permits
10. For wholly State-funded contracts, failure to have valid, current registration with the New Jersey Department of Labor, Division of Wage and Hour Compliance according to N.J.S.A. 34:11-56.48 et seq., at the time of bid.

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

This project is being bid by use of an electronic bidding process. 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. Once the bidder has registered, log on using the log on ID and password provided to you by Bid Express. Select New Jersey by either clicking "NJ" on the map or using the drop down list. The bidder must then download the Expedite bidding software. When installing the bid program the Bidder enters their Vendor code assigned by NJDOT. Before running the electronic bidding program, the Bidder shall read the on-line help documentation for the Expedite Software.

All bid documents with the exception of the Power of Attorney for the Proposal Bond shall be downloaded from the NJDOT Bid Express web site. A bid shall consist of the downloaded and properly completed proposal form, proposal bond, and financial statement plus the Power of Attorney for the Proposal Bond all of which shall 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 approximate estimate of the various quantities and kinds of Work to be performed, and includes a schedule of Pay Items for which bid prices are invited. The Proposal Form and accompanying Special Provisions state the number of days or date in which the Project must be completed, the amount of the Proposal Bond, and the date, time, and place of the opening of Proposals. The financial statement provides current information regarding the bidder's financial condition. The Proposal Bond guarantees execution of the contract by the bidder receiving the award. Other Contract Documents are considered part of the proposal whether attached or not.

The bidder is required to submit both a paper bid which is produced from the Expedite software as well as an electronic copy which shall be on diskette or CD-ROM. 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.

If you experience any problems with the web site, downloading documents or the Expedite software contact:

Joseph Weber
NJDOT
TRNS*PORT Project Manager
609-530-2469

102.04 Interpretation of Quantities in Proposal Form.

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment will be made only for the quantities of Work completed according to the Contract. Such payment will be made at the original unit prices for the quantities of Work accepted by the Engineer. The scheduled quantities of Work may be increased or decreased, or Pay Items may be eliminated in their entirety as hereinafter provided.

102.05 “If and Where Directed” Items.

The Proposal Form may request bids on one or more Pay Items to be incorporated into the Project “if and where directed” by the Engineer. Such items may not be located on the Plans. The estimated quantities set out in the Proposal Form for such items are presented solely for the purpose of obtaining a representative bid price, but are not intended to indicate the Department’s anticipation as to the quantities of such items which are to be actually incorporated into the Project. Depending on field conditions, such “if and where directed” items may or may not be incorporated into the Project and if incorporated may be many times the estimated quantity or only a fraction thereof.

Incorporation of such items shall only be made on written directions of the Engineer. In the absence of written directions, no such items shall be incorporated into the Project and if incorporated will not be paid for. The Engineer may order incorporation of such items at any location within the Project and at any time during the Contract Time. Claims for additional compensation shall not be made because of any increase, decrease, or elimination of such items, nor because of an increase or decrease in the amount of Work due to the field conditions encountered in incorporating such items into the Project.

102.06 Examination of Contract Documents and Site of Project.

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.

Summary of Depths to Impenetrable Layer

Core No.	Direction	Lane	Milepost	Taken beneath:	AC Thickness (in.)	PCC Thickness (in.)	Approximate Depth to Impenetrable Layer¹ (in.)
5	Eastbound Local	Right Shoulder	51.76	Burnet Ave. Overpass Bridge	5 3/4	---	24
11	Westbound Local	Right Shoulder	51.76	Burnet Ave. Overpass Bridge	6 1/4	---	28
6	Eastbound Local	Right Shoulder	52.21	Halsey St. Overpass Bridge	5	---	27
10	Westbound Local	Right Shoulder	52.21	Halsey St. Overpass Bridge	8 1/2	---	53

1	Eastbound Express	Right Shoulder	50.58	Springfield Ave. Overpass Bridge	5	---	26
8	Eastbound Local	Right Shoulder	50.58	Springfield Ave. Overpass Bridge	5 1/4	---	14
17	Westbound Express	Right Shoulder	50.58	Springfield Ave. Overpass Bridge	10 1/2	---	> 38
4	Eastbound Local	Right Shoulder	51.43	Vauxhall Rd. Overpass Bridge	5	---	20
12	Westbound Local	Right Shoulder	51.43	Vauxhall Rd. Overpass Bridge	6	---	32

¹The depth to an “impenetrable layer” was measured from the existing pavement surface. It was not possible to determine whether such a layer was actually a foundation structure, bedrock, or some other solid object.

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. Pavement core diameter was four inches.

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 & 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.

Route 78 (1953) Section 5CE
I-78 Contract No. 050960709
Route 78 Section 5AU (As-Built)

4. **Permits.** There are no permits required on this project.

THE FOLLOWING IS ADDED:

5. **Bridge Deck.** The records of the Department’s Bridge Deck Evaluation Report using Ground Penetrating Radar (GPR) 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 the Proposal.

The Bidder shall submit a Proposal produced from the Expedite software that was downloaded from the NJDOT Bid Express web site. The Proposal shall include all addenda which shall also be downloaded from that web site. . The Bidder shall specify a price in figures for each Pay Item. For lump sum items, the price should 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 therefore. When the Bidder intends to bid zero (\$0.00) for a Pay Item, a "0" should appear in the "Unit Price" and "Amounts" columns for unit price items or in the "Amounts" column for lump sum items.

When the Proposal 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 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 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 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 the latest addendum issued by the Department. 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. Once the Bidder has completed the bid and made all desired changes, the paper bid with original signatures and an electronic copy on a diskette or CD-ROM shall be submitted to the Department. In the event of a discrepancy between the electronic copy and the paper bid, the paper bid will govern. The electronic copy on diskette or CD Rom shall be submitted in a separate envelope from the paper bid. The envelopes containing the paper bid and electronic copy shall each include the bidder's name and the DP number of the electronic bid submitted.

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."

102.08 Balanced Bids.

Each Pay Item should reflect the actual cost, which the Bidder anticipates incurring for the performance of that particular item, together with a proportional share of the Bidder's anticipated profit, overhead, and costs to perform work for which no Pay Item is provided. In no event will the Department consider any claim for additional compensation arising from the bid on an item, or group of items, inaccurately reflecting a disproportionate share of the Bidder's anticipated profit, overhead, and other costs.

102.09 Delivery of Bids.

Each bid should be in delivered in 2 envelopes one containing the paper bid and related documents the other electronic copy on either a diskette or CD ROM Each envelope shall clearly indicate its contents= 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 questionnaire, submitted in a separate envelope, is acceptable instead of a separate questionnaire for each Project.

102.10 Proposal Bond.

The bid, when submitted, shall be accompanied by a Proposal Bond satisfactory to the Commissioner, 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) are not satisfactory to the Commissioner and shall not be accepted.

The Proposal Bond shall be properly filled out, signed, and witnessed, and shall be furnished only by such surety company or companies authorized to do business in this State as are listed in the current US Treasury Department Circular 570 as of the date for receipt of bids for the particular Project.

The Proposal Bond shall be accompanied by a copy of the power of attorney executed by the surety company or companies. The power of attorney shall set forth the authority of the attorney-in-fact who has signed the bond on behalf of the surety company to bind the company and shall further certify that such power is in full force and effect as of the date of the bond.

102.11 Withdrawal of Bids.

A Bidder may withdraw a Bid after it has been submitted to the Department, provided the request for such withdrawal is received by the Department, in writing or by fax before the time set for opening bids.

Bids shall not be withdrawn after the time designated for the public opening of such bids, except that when Bids for more than one project are to be opened at the same time, a Bidder, at its option, may submit a written request to withdraw its Bid for the second or succeeding project. The Bidder shall notify the Department, in writing, of its intent to exercise this option before the time set for opening of Bids. In such event, a short interval of time will be allowed between project Bid openings to allow the Bidder time to submit an executed Department of Transportation "Request for Withdrawal of Bid" form. Upon presentation of the executed form at the proper time, a Bidder's Bid will be returned unopened.

102.12 Combination or Conditional Bids.

If the Department so elects, Bids may be issued for projects in combination and/or separately, so that bids may be submitted either on the combination or on separate units of the combination. The Department reserves the right to make awards on combination bids or separate bids to the best advantage of the Department. Combination bids other than those specifically provided for in the bid forms will not be considered. Separate Contracts will be awarded for each individual Project included in the combination.

Conditional Bids will be considered only when provided for in the Special Provisions.

102.13 Acknowledgment of Revisions.

When Addenda and other forms of notice giving revisions and interpretations of the Contract Documents are posted on the NJDOT Bid Express web site, acknowledgment thereof must be made by the Bidder. The acknowledgment shall be sent or hand delivered to the office and/or individual noted on the form and must be received before the Bid is opened. If the acknowledgment has not been received before the opening of bids, the bid envelope will be returned to the Bidder unopened. It is the obligation of the bidder to check the New Jersey Bid Express home page for addenda. The Department will not send addenda to individual prospective bidders, but will only post addenda on the New Jersey Bid Express home page. 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.

102.14 Public Opening of Bids.

Bids will be opened and read publicly at the time and place indicated in the Advertisement or such other time and place as may be established by Addendum. Bidders, their authorized agents, and other interested parties are invited to be present.

102.15 Irregular Bids.

Bids 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 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 attachment included in the Special Provisions for FHWA funded contracts.
4. The bid is materially unbalanced.

102.17 Rejection of All Bids

The Department may reject all bids when the Commissioner determines 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 and Escrow of the Contract.

1. **Execution.** 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 Commissioner 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.
2. **Escrow.** The successful Bidder who would like to participate in the Non-Binding Mediation of any and all claims arising under the Contract, as provided in Subsection 107.02, shall, within the same ten State Business Day period, escrow all of its bid preparation documents, which are dated prior to or as of submission of the bid proposal to the Department, in sealed boxes with a Custody Agent, and return to the Department a Custody Agreement fully executed by the Bidder and the Custody Agent. The Bidder shall also certify under oath that the escrowed documents have not been modified changed or corrected in any manner since the date appearing on said documents and that the documents escrowed constitute all related documents relied upon in preparing the proposal. The Custody Agreement Form will be provided by the Department at the time of Award and shall be completed in its entirety and include a detailed list of all documents contained in the boxes of bid documents placed in escrow.

A failure by the Bidder to escrow its bid preparation documents and to return to the Department the fully executed Custody Agreement within ten State Business Days shall constitute a waiver by the Bidder of any ability or opportunity to participate in the Non-Binding Mediation of claims arising under the Contract. The use and preservation of escrowed bid documents shall be governed by the terms of the escrow agreement that is to be executed by the Contractor and the escrow agent, which agreement shall be in accord with the form provided by the Department. Upon Completion of the Contract, the Contractor may apply to the Department to release any escrowed documents so long as there are no pending claims.

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.

104.07 Changes in Character of Work.

THE FIRST PARAGRAPH UP TO AND INCLUDING THE FIRST SENTENCE OF ITEM 1 IS CHANGED TO:

If an ordered alteration in the Work pursuant to Subsection 104.02 materially changes the character of the work of a Pay Item, and if the change substantially increases or decreases the actual unit cost of such changed item as compared to the actual or estimated actual cost of performing the work of said item according to the Contract Documents originally applicable thereto, in the absence of a supplementary agreement or unprotested Change Order specifying the compensation payable, an adjustment in compensation therefore will be made according to the following:

1. The basis of such adjustment in compensation will be the difference between the actual unit cost to perform the work of said item or portion thereof involved in the alteration as originally planned and the actual unit cost of performing the work of said item or portion thereof involved in the alteration, as changed.

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.

THE FOLLOWING IS ADDED TO THE LIST IN PARAGRAPH SEVENTEEN:

23. Temporary Lighting System

105.07 Coordination of Contract Documents.

THE SUBSECTION HEADING AND TEXT ARE CHANGED TO:

105.07 Purchase of Contract Documents.

Request for Plans, Specifications, and Proposal Forms shall be directed to the Cashier of the Department, accompanied by a check for the proper amount, according to the rates on file, drawn to the order of the New Jersey Department of Transportation. Requests for those items furnished without charge shall be directed to the Bureau of Construction Services.

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 upon request, at a charge according to the Department rate.

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

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:

ELECTRIC

**Mr. Charles King, Engineering
Metropolitan Division
Public Service Electric and Gas Company
150 Circle Avenue
Clifton, New Jersey 07011
Telephone: 973-365-2810**

TELECOMMUNICATION

**Mr. Gary Stevenson, OPS Engineer
Verizon – NJ, Inc.
445 Georges Road
North Brunswick, NJ 08902
Telephone: 732-418-2620**

GAS

**Mr. L.A. Pannucci,
Delivery Construction Team Leader
Public Service Electric and Gas Company
80 Park Plaza
Newark, New Jersey 07102-4194
Telephone: 973-430-51340**

WATER

**New Jersey American Water
Mr. Michael Wolan, Sr. Project Manager
P.O. Box 1207
Bell Mead, New Jersey 08502
Telephone: 908-31-3225**

SANITARY

**Mr. James J. Paluch, Collection System Engineer
Joint Meeting of Essex and Union Counties
500 South First Street
Elizabeth, New Jersey 07202
Telephone: 9082-353-1313**

CABLE TV

**Mr. Richard Gugulski, Outside Plant Engineer
Comcast Cablevision of New Jersey
800 Rahway Avenue
Union, NJ 07083
Telephone: 732-602-7444, Ext. 2293**

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

The Contractor is advised that the design for this Contract did not identify any anticipated utility conflicts. However, this Contract does require the Contractor to perform underground excavation and/or the driving of guide rail posts and is reminded to call the State's One Call System as specified in Subpart C., to verify that a conflict does not exist.

- 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.

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) 4 multi-line touch-tone telephones and 3 telephone lines for use with the telephones installed as directed and operational in the Field Office and other facilities specified.
- (a) 1 dedicated, operational telephone line for the Fax machine and 3 dedicated telephone lines (highspeed or DSL) for the microcomputer systems modem use installed as directed in the Field Offices specified.
- (b) 6 portable hand held cellular phones, each with a two-way radio capacity. 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) 1 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) 3 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) 2 base printers 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) 3 software packages, 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) 1 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) 1 Primavera Project Planner (P3) 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:

- Ten (10) of each: hard hats (Orange in color, reflectorized) and safety vests (Orange in color, reflector-ized, 360° high-visibility that meet ANSI/ISEA standards for Class 3 garments). It should be noted that safety vests are to be replaced as needed for the duration of the project.
- Ten (10) sets: ear protection and eye protection, to be replaced as needed for the duration of the project
- Concrete testing equipment to include [two (2) of each]: Concrete receptacle (wheel barrow), square tipped shovel, concrete scoop, slump cone & base set (rod, slump cone, base and funnel), tamping rod (12 inches long, 3/8-inch diameter with hemispherical ends), tamping rod (24 inches long, 5/8-inch diameter with hemispherical ends), 12-inch ruler, Forney air meter (complete set) or equivalent, two concrete thermometers, sponge, long-handled round scrub brush, rubber or rawhide mallet (2.25 lb. +/- 0.50 lb.), pointed trowel, five-gallon plastic bucket, concrete cylinder curing items in accordance with this project's applicable governing Specifications.
- Fifteen (15) six-foot folding measuring rules
- Five (5) Engineer's Scales

- Two (2) Architect’s Scales
- Two (2) 50-foot cloth measuring tapes
- Three (3) 25-foot steel measuring tapes
- Three (3) measuring wheels, with English measuring units (in feet)
- Three (3) line levels and cords
- Two (2) electronic Smart levels
- One (1) surface thermometer
- Two (2) digital infrared thermometers
- Four (4) asphalt thermometers
- One (1) sledge hammer
- One (1) additional digital still camera (One (1) is already provided by the Specifications)
- Ten (10) lanterns, each with a replacement battery as required

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:

<i>Pay Item</i>	<i>Pay Unit</i>
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, N.J.S.A. 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 exist 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.

SECTION 108 - PROSECUTION AND PROGRESS

108.02 Subcontracting.

Specialty Items are as listed below:

- Above ground highway lighting items.
- Electrical wire items.
- Rubbllization

THE FOLLOWING IS ADDED TO THE END OF THE FIFTH PARAGRAPH:

The Contractor shall also attach to that form (application for subcontracting form) proof of the Subcontractor's 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). Pursuant to P.L. 2003, c. 91, the Department will not consent to the proposed subcontracting, and the Subcontractor shall not perform any work under the Contract, unless the Contractor first provides the required proof of the Subcontractor's valid, current registration with the New Jersey Department of Labor, Division of Wage and Hour Compliance as required by "Public Works Contractor Registration Act." The Contractor shall ensure full compliance with the Public Works Contractor Registration requirements by their Subcontractors.

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. Twenty 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:

<i>Pay Item</i>	<i>Pay Unit</i>
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:

<i>Pay Item</i>	<i>Pay Unit</i>
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 completion of Stage I construction including the final paving and striping shall be completed in 162 calendar days. The work period shall begin when the Route 78 Eastbound and Westbound Express roadways are closed to traffic and shall end when the Express roadways are re-opened to two lanes of traffic in each direction.
- B. All work required for Substantial Completion of the Project shall be completed on or before November 1, 2007.
- C. The entire Work of the Project shall be completed on or before December 1, 2007.

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 20 for road work and 40 for bridge 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.

108.16 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 Stage I Construction, the Contractor shall pay liquidated damages to the State in the amount of \$10,000.00/Day.
2. For each Calendar Day that the Contractor fails to complete the Work as specified in Subpart B 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 \$15,100.00/Day.
3. For each Calendar Day that the Contractor fails to complete the entire Work of the Project as specified in Subpart C 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 \$3,100.00/Day, 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 applicable rate or rates per minute per lane as set forth in this 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:

<u>Description</u>	<u>Rate per Minute</u>
<u>Route 78 Westbound Local (Three Travel Lanes)</u>	
Overrun of "Two Lanes Maintained" AM Time Limits -	\$50/minute
Overrun of "Two Lanes Maintained" PM Time Limits -	\$150/minute
Overrun of "One Lane Maintained" Time Limits -	\$200/minute
<u>Route 78 Westbound Express (Two Travel Lanes)</u>	
Overrun of "One Lane Maintained" AM Time Limits -	\$20/minute
Overrun of "One Lane Maintained" PM Time Limits -	\$200/minute
<u>Route 78 Eastbound Local (Three Travel Lanes)</u>	
Overrun of "Two Lanes Maintained" AM Time Limits -	\$100/minute
Overrun of "Two Lanes Maintained" PM Time Limits -	\$50/minute
Overrun of "One Lane Maintained" Time Limits -	\$200/minute
<u>Route 78 Eastbound Express (Two Travel Lanes)</u>	
Overrun of "One Lane Maintained" AM Time Limits -	\$150/minute

Overrun of "One Lane Maintained" PM Time Limits - \$200/minute

Route 78 Westbound & Eastbound Local (Four Travel Lanes)

Overrun of "Three Lanes Maintained" Time Limits - \$100/minute

Overrun of "Two Lanes Maintained" Time Limits - \$200/minute

Route 78 Westbound & Eastbound Ramps

Overrun of "Ramp Closure" Time Limits - \$20/minute

SECTION 109 – MEASUREMENT AND PAYMENT

109.01 Measurement of Quantities.

THE FOLLOWING IS ADDED TO THE END OF TYPE 2 PAY ITEMS:

BRIDGE APPROACH SLABS \$1.60 Per cubic yard

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.

109.06 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.

SUBPART 1 OF THE FIRST PARAGRAPH IS CHANGED TO:

1. Each subcontractor or supplier has been promptly paid any amount due from any previous progress payment and shall be paid any amount due from the current progress payment, including all retainage withheld from the subcontractor or supplier, within 14 days of the receipt by the Contractor of payment from the Department; or

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.

DIVISION 200 - EARTHWORK

SECTION 201 - CLEARING SITE

201.12 Basis of Payment.

THE SECOND PARAGRAPH IS CHANGED TO:

Payment for the Pay Item "Clearing Site" in excess of \$300,000.00 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".

THE FOLLOWING IS ADDED TO THIS SECTION:

RUBBLIZING OF REINFORCED CONCRETE PAVEMENT

Description.

This work consists of rubblizing and seating the existing portland cement concrete pavement prior to placing a hot mix asphalt overlay.

MATERIALS

Materials.

Materials shall conform to the following Subsections:

Dense Graded Aggregate Base Coarse.....Section 901.08

EQUIPMENT

Equipment.

Rubblization shall be accomplished by the use of a pavement breaker machine that is capable of delivering sufficient energy to rubblize the pavement full-depth in a manner that completely destroys the concrete slab and all slab action. The pavement breaking equipment shall be capable of operating to within one-foot of barrier curbs and structures, and as required by the traffic control plans.

Sufficient seating equipment shall be utilized to thoroughly settle the rubblized concrete and to provide a smooth surface for the HMA overlay. The type of rubblization machine and the minimum types of associated rolling equipment used in the rubblization process shall be as follows:

- A. **Resonant (Sonic) Breaker Machine:** A self-contained, self-propelled resonant frequency breaker specifically designed for the purpose of rubblizing portland cement concrete pavement. The machine shall be capable of producing low amplitude (one inch maximum) blows with a two thousand pounds force, and delivering blows to the existing PCC surface at a rate of not less than 44 cycles per second. The breaker shall be equipped with a screen to protect vehicles in the adjacent lane from flying chips during the fracturing process when necessary.
- B. **Resonant (Sonic) Breaker Seating Equipment:** The contractor shall provide and utilize a smooth steel drum vibratory roller. The roller shall have a gross weight of not less than 10 tons as operated in the

vibratory mode, to settle and seat the rubblized pavement and provide a smooth surface for the HMA overlay.

- C. **Multi-Head Breaker Machine:** A self-contained, self-propelled multi-head breaker specifically designed for the purpose of rubblizing portland cement concrete pavement. The machine shall be capable of rubblizing the pavement a minimum width of thirteen feet per pass. Pavement breaking hammers shall be mounted laterally in pairs with half the hammers in a forward row and the remainder diagonally offset in a rear row so that there is continuous breakage from side to side. The lift height of the hammers shall be independently adjustable. The breaker shall be equipped with a screen to protect vehicles in the adjacent lane from flying chips during the fracturing process when necessary.
- D. **Multi-head Breaker Seating Equipment:** The contractor shall provide and utilize the following seating equipment:
1. **Z-Grid Roller:** A vibratory steel drum roller fitted with a “Z” pattern grid on the drum face. The roller shall have a gross weight of not less than 10 tons as operated in the vibratory mode, to settle and seat the rubblized pavement, and provide a smooth surface for the HMA overlay.
 2. **Pneumatic-Tire Roller:** A pneumatic-tire roller with a gross weight of not less than 25 tons shall be used after the Z-Grid roller to further settle and seat the rubblized pavement.
 3. **Smooth Steel Drum Vibratory Roller:** The contractor shall provide and utilize a smooth steel drum vibratory roller. The roller shall have a gross weight of not less than 10 tons as operated in the vibratory mode, to settle and seat the rubblized pavement and provide a smooth surface for the HMA overlay.

Rubblization machines and rollers of other design that will accomplish similar results may also be used with the approval of the engineer. All rubblization and seating equipment necessary to perform the work will be considered essential to the completion of the project, and will not be paid for separately.

CONSTRUCTION

Rubblization Plan.

Submit a pavement rubblizing plan and list of proposed equipment for Department approval prior to the start of construction. If, during rubblizing operations, satisfactory results are not being obtained, cease all rubblizing operations and submit an alternate plan and/or list of equipment capable of obtaining the specified results to the Engineer. Resume rubblizing operations upon acceptance of the alternate plan. Repeat this procedure as necessary to obtain the specified results.

Rubblization Criteria.

The existing concrete pavement shall be rubblized to the required extent for the specific rubblization process specified as follows:

- A. **Resonant (Sonic) Breaker Process.** The existing PCC pavement shall be broken into pieces ranging from sand size to pieces generally 6 inches or less in size. No individual piece shall exceed eight inches in any dimension. The majority of the rubblized concrete shall be 1 to 3 inches in size. For reinforced portland cement concrete (RPCC) pavement, the reinforcing steel shall be debonded from the concrete and left in place unless protruding above the surface. Concrete pieces below the reinforcing steel shall be reduced to the greatest possible extent, and no individual piece shall exceed 8 inches in any dimension. Due to lack of edge support, concrete pieces below the reinforcing steel up to 12 inches in any dimension will be accepted along the outside edge of the existing PCC pavement, up to 1 foot from the edge.
- B. **Multi-Head Breaker Process.** The existing PCC pavement shall be broken into pieces ranging from sand size to pieces generally 3 inches or less in size in the top half of the pavement and 9 inches or less in the bottom half of the pavement. No individual piece shall exceed 9 inches in any dimension. For reinforced portland cement concrete (RPCC) pavement, the reinforcing steel shall be debonded from the concrete and left in place unless protruding above the surface. Concrete pieces below the reinforcing steel shall be reduced to the greatest possible extent, and no individual piece shall exceed 9 inches in any dimension. Due to lack of edge support, concrete pieces below the reinforcing steel up to 12 inches in any dimension will be accepted along the outside edge of the existing PCC pavement, up to 1 foot from the edge.

- C. Unstable Subgrade Areas.** In areas where the approved rubblization procedure, sonic resonant breaker process or multi-head breaker process, causes existing roadbed soils to become damaged or unstable, the breaking energy shall be reduced and the size of the broken concrete pieces shall be increased as follows:
The existing PCC pavement shall be broken into pieces ranging from sand size to pieces generally 3 inches or less in size in the top half of the pavement and 18 inches or less in the bottom half of the pavement. No individual piece shall exceed 18 inches in any dimension.

Drainage System Installation.

Prior to rubblization operations, drainage systems as specified on the plans shall be installed. Specifically the Underdrains Type F and Type X, within the rubblization section must be installed and shall be properly functioning for a minimum of two weeks prior to rubblization operations including the test strip.

Removal of Existing Asphalt Surfaces.

Prior to the rubblization operations, existing asphalt overlays and patches shall be removed, in accordance with [Section 202.09](#), from the PCC pavement surfaces to be rubblized. Existing full-depth asphalt patches shall remain in place, unless directed for removal by the Engineer.

Saw-cut Joints.

A new, full-depth diamond blade saw-cut joint shall be made along an existing joint at all ramps and mainline pavement where rubblized PCC abuts pavement that is to remain in place. All load transfer devices between the planned rubblization and PCC pavement to remain in place shall be severed.

Test Strip.

Before the rubblization operations begin, the Engineer will designate a test section of approximately 500 feet by 12 feet. The Contractor shall rubblize the test section using varying degrees of energy and/or various striking heights until a procedure is established that will rubblize the pavement to the required extent as contained in these specifications. A 3 foot by 12 foot test pit shall be excavated for the full depth of the rubblized pavement in the middle of the test strip, at a location selected by the Engineer, to determine that the breaker is producing pieces of the specified sizes as contained in these specifications. The rubblized particle sizes shall be checked throughout the entire depth of the pavement. The Engineer may require additional test pits. The test pit material shall be removed from the project and the hole filled using dense graded aggregate base course as determined by the Engineer. The replacement material shall be placed and properly compacted by the Contractor.

Rubblization Procedure.

The Engineer and the Contractor shall mutually agree upon the rubblization procedure. The procedure, thus established, shall be used to rubblize the remainder of the pavement. Use mechanical or resonant (sonic) vibratory equipment capable of providing concrete pieces of the specified dimensions, throughout the full depth of the pavement, on a regular and continuous basis. Remove any equipment from the project, which fails to provide an acceptable product and replace with acceptable equipment. The Contractor shall continuously monitor the rubblization operation, and make minor adjustments in the striking pattern, striking energy, number of passes, and other factors as necessary to continually achieve acceptable breaking throughout the project. The contractor shall inform the Engineer of any major adjustments that may be required in the process in order to provide rubblized pavement that conforms to the specification requirements contained herein. The following general rubblization procedures shall be applied:

- A.** The rubblization shall be done in partial widths when necessary to maintain traffic as shown on the plans and contained in the contract documents.
- B.** When rubblizing in a lane adjacent to a lane that is open to traffic, measures shall be taken to prevent debris from entering the traffic lane and all costs thereof shall be included in the price bid for Rubblization.
- C.** In areas where the roadway must be overlaid one lane at a time, initial rubblization will extend a minimum of 6 in. beyond the width of the pavement to be overlaid.
- D.** For the Resonant (Sonic) Breaker Process, rubblizing shall begin at a free edge or previously broken edge and progress toward the opposite shoulder or longitudinal centerline of the road. Continuous coverage of the entire PCC pavement surface, overlapped if necessary to achieve adequate rubblization, with the breaking shoe shall be required. Additional passes of the resonant (sonic) breaker machine may be required if larger size concrete pieces remain above the reinforcement.

Test pits shall be used to ensure that pieces are free of bond with reinforcement to permit adequate seating and to ensure that the pavement is being rubblized to the specific dimensions. Excavate two, 3-foot by 12-foot, full-depth sections of rubblized pavement, within the first 1/2-mile of rubblizing operations. Excavate additional areas, as directed by the Engineer, to assure that the specified dimensions are being maintained. Repeat the initial two sections, full-depth pavement removal testing procedure whenever the equipment, rubblizing pattern, or breaking force is changed. Use Dense Graded Aggregate Base Coarse to backfill all excavated areas. Place backfill in maximum 6-inch lifts and compact by rolling until nonmovement is achieved. Additional test pits may be required by the Engineer to confirm that the PCC pavement is adequately rubblized.

Seating Procedures.

The contractor shall utilize the rolling equipment contained in these specifications as follows:

- A. Resonant Breaker Process:** The rubblized PCC pavement shall be rolled with a minimum of three passes over the entire width of the pavement with a vibratory steel drum roller. For this operation, a pass is defined as forward and back over the entire surface area. The Engineer may require additional passes in order to satisfactorily seat the rubblized pavement and provide a smooth surface that is ready for the HMA overlay. The roller shall be operated at a speed not to exceed 6 ft. per second.
- B. Multi-Head Breaker Process:** Prior to placing the hot mix asphalt overlay, the entire width of the pavement shall be rolled by vibratory and pneumatic-tire rollers following the sequence contained herein. For this operation, a pass is defined as forward and back over the entire surface area. After Rubblizing:
 - 1. Two passes with the “Z-Grid” roller shall follow the multi-head breaker machine.
 - 2. One pass with the pneumatic-tire roller

Immediately Prior to HMA Overlay: One pass with the vibratory steel drum roller.

The Engineer may require additional passes of the rolling equipment in order to satisfactorily compact the rubblized pavement and provide a smooth surface that is ready for the HMA overlay. Additional rolling at the direction of the Engineer shall be considered incidental to the work, and will not be separately paid for. Rolling shall not be performed in wet conditions.

Removal of Exposed Reinforcing Steel and Transverse Joint Assemblies.

Reinforcing steel in the rubblized pavement shall generally be left in place. Reinforcing steel that becomes exposed at the surface during the rubblization process or rolling operations shall be cut flush with the rubblized surface, or slightly below the surface, and removed from the project by the Contractor. Remove any transverse joint assemblies that are partially or fully exposed. The Contractor shall also remove any loose joint filler, expansion materials, or other similar items.

Unstable Area Patching.

If unstable areas occur because of expansion of the existing concrete pavement, they shall be removed to a maximum length of 4 feet in length by 12 feet in width and replaced with full-depth Hot Mix Asphalt (patching) at the direction of the Engineer. Patching procedures shall conform to the standard specifications, and shall be completed prior to placing the Hot Mix Asphalt overlay. Hot Mix Asphalt (Patching) will be paid at the price bid for the Superpave HMA Base Course item.

Areas of poor subgrade support that are identified during the rubblization and seating process shall be patched at the direction of the Engineer. Generally, the rubblized pavement, base course, and subgrade material will be removed from unstable areas. The material will be replaced with dense graded aggregate base course compacted in lifts as required in the standard specifications. Dense graded aggregate base course (patching) will be paid for as a separate bid item as provided in these specifications.

Depressions in the final rubblized surface that are stable shall be corrected by adding dense graded aggregate base course (leveling) as directed by the Engineer.

Dust Control.

The contractor shall minimize the dispersion of dust from the rubblization operation until the rubblized surface is overlaid with HMA. The contractor shall provide a water truck, operator, and all water necessary for dust control purposes. Excessive water shall not be applied to the rubblized surface. Separate payment will not be made for dust control and all costs thereof shall be included in the price bid for Rubblization. The Engineer shall approve dust mitigation measures.

Damages to Base, Underlying Structures, Other Facilities.

The rubblization equipment shall be operated in a manner so as not to damage the roadbed, underlying structures, utilities, drainage facilities, bridge approach slabs, bridge decks, and other facilities on the project.

Between NB and SB Stations 774+59 and 821+31, prior to rubblization and again after rubblization, all existing drainage facilities noted on the Plans shall be inspected for damage using methods acceptable to the Engineer. Pipes shall be inspected using drainage pipe scoping methods. Any damage found prior to rubblization shall be repaired in a timely manner as directed by the Engineer. If any damage occurs after rubblization, the contractor shall immediately cease his operations, notify the Engineer, and repair the damage in a timely manner as directed by the Engineer.

Progress of the Work.

In no instance shall more than 48 hours elapse between rubblizing the pavement and the placement of the HMA overlay. If rain occurs between these operations, this time limitation may be waived to allow sufficient time for the rubblized pavement to dry to the satisfaction of the Engineer. If the Engineer waives the time limitation, cease rubblizing the pavement until the Engineer allows paving to resume.

Final Surface.

After final seating, sweep and clean the surface of the rubblized and seated pavement to remove all loose material. Do not allow traffic on the roadway after the pavement has been rubblized and seated. Repair all rubblized and seated pavement areas disturbed by construction traffic, at no cost to the Department. Complete all operations prior to construction of the HMA pavement course. Apply a prime coat to the rubblized and seated surface, as specified in [Subsection 404.15](#), prior to placing the HMA base course.

Opening to Traffic.

Traffic will not be allowed on the rubblized pavement before placement of the proposed HMA base and intermediate courses. The Engineer may waive this restriction for up to twenty-four hours when necessary for the maintenance of traffic as shown in the project’s traffic control plan. Rubblized crossovers and ramp crossings exposed to traffic shall be maintained in the same compacted state as other areas until the placement of the HMA overlay. Rubblized material that becomes dislodged by traffic shall be immediately removed, and the Contractor shall restore the crossover to a safe operating condition.

COMPENSATION

Method of Measurement.

The quantity of concrete pavement rubblized will be measured as the number of square yard of concrete base and surface courses rubblized and accepted.

Roadway Excavation, Unclassified in unstable subgrade areas will be measured by the cubic yard of material actually excavated in the work.

Removal of Concrete Base Course and Concrete Surface Courses at unstable subgrade locations will be measured by the square yard of material actually removed in the work.

Dense Graded Aggregate Base Course used for leveling and patching will be measured by the cubic yard of material actually used in the work.

Superpave Hot Mix Asphalt Base Course used for patching will be measured by the ton of material actually used in the work.

BASIS OF PAYMENT

Payment will be made under:

<i>Pay Item</i>	<i>Pay Unit</i>
RUBBLIZATION	SQUARE YARD

Payment for Dense Graded Aggregate Base Course used for leveling and patching will be made according to Subsection 301.10.

Payment for Roadway Excavation, Unclassified will be made according to Subsection 202.15.

Payment for Removal of Concrete Base Course and Concrete Surface Courses will be made according to Subsection 202.15.

Payment for Superpave Hot Mix Asphalt will be made according to Subsection 406.19.

Payment for repairs of damage to existing drainage facilities found prior to rubblization will be paid for under the various items scheduled in the Proposal.

Separate payment will not be made for repairs of damage to existing drainage facilities found after rubblization and all costs thereof shall be included in the price bid for Rubblization.

Separate payment will not be made for inspecting existing drainage facilities for damage before and after rubblization and all costs thereof shall be included in the price bid for Rubblization.

Separate payment will not be made for the Removal of Hot Mix Asphalt Overlay prior to rubblization, but all cost thereof shall be included in the price bid for the Rubblization.

Separate payment will not be made for dust control and all costs thereof shall be included in the price bid for Rubblization.

Separate payment will not be made for test strips and all costs thereof shall be included in the price bid for Rubblization.

Separate payment will not be made for protecting traffic from flying chips and preventing debris from entering the traffic lane and all costs thereof shall be included in the price bid for Rubblization.

Separate payment will not be made for test pits and all costs thereof shall be included in the price bid for Rubblization.

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.

THE FOLLOWING IS ADDED TO THIS SECTION:

GEOTEXTILE, ROADWAY STABILIZATION

Description.

This work shall consist of the construction of geotextile for roadway subgrade stabilization and separation.

Materials.

The geotextile shall conform to AASHTO M-288, Geotextile Specifications for Highway Applications. The material shall conform to Sections 1, 2, 3, 4, 5, 6 and Subsections 7.1, 7.2, 7.3 and 7.4 for Separation and Stabilization with a Class 2 or Class 1 Survivability Rating. The minimum permittivity shall be 0.045 qt/sec./in.

The geotextile shall have high resistance to degradation from ultraviolet, chemical and organic conditions that may possibly be encountered in the subgrade soil or overlying subbase or base course material. The mechanical and structural properties of the geotextile shall equal or exceed the requirements of this specification. A product certification shall be provided with each shipment stating that the geotextile material conforms to the requirements of the approved submittal. The rolls of the geotextile shall be properly labeled to show the type and grade of material and the specification to which the material conforms.

Construction Requirements.

Installation of the geotextile shall conform to Appendices A1 and A3 of the AASHTO M-288 Geotextile Specifications for Highway Applications and the following:

The Contractor shall check the geotextile upon delivery to ensure that the proper material has been received. During all periods of shipment and storage, the material shall be protected from temperatures greater than 140 degrees F, or less than 32 degrees F, mud, dirt, dust and debris, or materials which may permanently affix to the geotextile. The manufacturer’s instructions regarding protection from direct sunlight shall be followed. At the time of installation of the geotextile, the Engineer will reject the material if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation or storage. The Contractor, at no cost to the State, shall replace geotextile that is damaged during storage or installation.

Prior to placing of any geotextile, the subgrade shall be shaped and compacted to within a tolerance of plus or minus ½ inch of grade and contour, with no areas consistently high, in accordance with Subsection 208.04. The prepared surface shall be free from water pockets and sharp objects that may tear or puncture the geotextile. Geotextile material shall not be placed on soft, muddy, or frozen areas, or until all irregularities in the prepared areas, including soft areas in the foundation, have been corrected.

The subgrade will be inspected and approved by the Engineer prior to placement of the geotextile. Excavation of unsuitable material and replacement with suitable material, as directed by the Engineer, will be in accordance with Subsection 208.04.

Geotextile material shall be placed in continuous strips in the longitudinal direction of the roadway. All adjacent layers of geotextile material shall be overlapped a minimum of one foot.

The Contractor shall verify the correct orientation (roll direction) of the geotextile. If the Contractor is unable to complete a required length with a single continuous length of stabilization a joint may be made, with the Engineer's approval. This joint shall be made for the full width of the strip. Joints shall be pulled and held taut and free of wrinkles and lying flat during placement of the subbase or base course material.

To prevent damage, only that amount of geotextile required for immediately pending work shall be placed. After a layer of geotextile has been placed it shall be pulled tight and held in place by means of pins or small piles of aggregate until the subsequent layer of subbase or base course is placed and compacted.

Subbase or base course material shall be placed, spread and compacted in such a manner as to minimize the development of wrinkles and/or displacement of the geotextile material. The subbase or base course shall be graded and rolled before the end of each workday to prevent ponding of water on the geotextile.

No vehicles or other construction equipment shall operate on the area until at least 6 inches of subbase or base course material cover the geotextile. Turning of tracked vehicles shall be minimized to prevent displacement of the underlying geotextile or roadbed. Ruts that may be created in the subgrade due to construction traffic shall be filled with additional material.

Method of Measurement.

Completed and accepted Geotextile, Roadway Stabilization will be measured by the horizontal area in square yard.

Basis of Payment.

Payment will be made under:

<i>Pay Item</i>	<i>Pay Unit</i>
GEOTEXTILE, ROADWAY STABILIZATION	SQUARE YARD

Payment will not be made for geotextile material used in the creation of overlaps.

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.

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.

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SECTION 303 – PLANT-MIXED STABILIZATION

THE FOLLOWING IS ADDED TO THIS SECTION:

ASPHALT-STABILIZED OPEN-GRADED DRAINAGE LAYER

Description.

This work shall consist of the construction of an open graded drainage layer. This layer is to be placed between the dense graded base course and the HMA or PCC pavement structure.

MATERIALS

Aggregate.

The aggregate shall be broken stone conforming to the requirements of Subsection 901.10

Asphalt Material.

The asphalt binder material shall conform to the requirements of Subsection 904.01 for grade 64-22, unless otherwise directed.

The prime coat shall be a cutback asphalt grade MC-30 or MC-70 conforming to Subsection 904.02.

Anti-Stripping Agent.

Anti-stripping agent when used shall be heat stable and conform to AASHTO R15.

Composition of the Mixture.

The mixture shall consist of asphalt binder and aggregate conforming to the following gradation requirements:

PRODUCTION TOLERANCE FROM JMF	SIEVE SIZE	JMF WIDE BAND ALLOWABLE PERCENT PASSING
+ 0.0	1”	100
+ 6.0	¾”	95 - 100
+ 5.5	½ “	85 - 100
± 5.5	3/8”	60 - 90
+ 5.5	No. 4	15 - 25
+ 4.5	No. 8	2 - 10
± 2.0	No. 200	2 - 5

The design asphalt binder content shall be 3 plus or minus 1/2 percent by weight of dry aggregate and mineral filler.

Mix Design.

The contractor shall submit for approval, a job mix formula for the material that shall include the source of each component.

The job mix formula for the mixture shall establish the percentage of dry weight of aggregate passing each required sieve size and the optimum percentage of asphalt binder based upon the weight of the total mix. The design values of percent passing each sieve size shall be within the gradation band of Subsection 303.05. The permeability shall be 1500 ± 500 feet per day.

Verification of Mix Design

At least 45 days prior to the production of the asphalt-stabilized open-graded material, the Contractor shall submit a mix design for approval. In addition, samples of the component materials shall be submitted for verification by the Central Laboratory. The quantities submitted shall be:

Blended Aggregate	198 pound
Asphalt Binder	1 gallon
Anti-Stripping Agent, if needed	0.264 gallon

The submitted sample will be tested for gradation according to AASHTO T-27. The components will be mixed according to the JMF at a temperature of 260 degrees F. The mixture will be compacted according to ASTM D1074 and the NJDOT Laboratory procedure “Compaction of Bituminous- Stabilized Open-Graded (BSOG) Base Course Material”. The samples will be compacted at 260 degrees F using a Universal Testing machine. The stress applied will be 600 psi for carbonate rock and 1000 psi for all other aggregate types. Permeability will be determined according to NJDOT Laboratory Procedure “Falling Head Permeability Test for Non-Stabilized and Bituminous Stabilized Open Graded Base Course Materials”.

At the Department's option, verification of the mix design may be done on an annual basis provided the properties and proportions of the materials do not change appreciably. The approved proportions of material will govern during the progress of work, except that the Contractor may change to another previously approved mix design, provided that the Engineer is notified at least three days prior to the change. No change in source or character of any material shall be made until approved by the Engineer, based on the results of tests of the new design mixes or previously approved mix designs using the new material.

EQUIPMENT

Equipment.

All equipment necessary for the satisfactory performance of this construction shall be on the project and approved by the Engineer before work will be permitted to start. Equipment shall conform to Subsections 404.04 through 404.11.

CONSTRUCTION

Limitations.

The base course shall be checked and approved far enough in advance of spreading the stabilized drainage layer to permit one day's paving operation, exception being permitted at the discretion of the Engineer. The laydown temperature as measured in the receiving hopper of the paver shall be 250 plus or minus 40 degrees F and the rolling temperature 212 plus or minus 40 degrees F.

Preparation of Base Course.

The base course shall be prepared in accordance with the applicable provisions of Section 209. Prime coat must be applied directly beneath this layer and shall be applied in accordance with Subsection 404.15. The Engineer does not have the option of waiving the Prime Coat requirement.

Preparation of Hot Mix Asphalt.

The material shall be produced at a HMA plant as described in Section 404.04, except that the requirements for crushed recycled container glass and RAP do not apply.

The temperature of the mixture at discharge from the plant or surge and storage bins shall be maintained at a minimum of 50 degrees F above the laydown temperature, but in no case shall the mixture temperature exceed 300 degrees F.

Quality Assurance Testing.

(a) Conformance to Job Mix Formula.

Conformance to the job mix formula will be determined on the basis of ignition oven samples taken and tested according to AASHTO T308 at the mixing plant for batch plants, and shall be determined by plant printout tickets and hot bin samples for fully automated batch plants. If the composition testing results are out of the mixture tolerances specified in Subsection 303.05, the Contractor shall determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also out of the mixture control tolerances in Subsection 304.09, corrective action shall be taken immediately and additional quality control samples shall be taken as necessary to ensure that the mix is under control. If two consecutive acceptance samples are outside the tolerances specified on any sieve content, production shall stop immediately and the producer shall correct the deficiency before continuing production.

(b) Sampling and Testing.

Sampling rates and testing for asphalt cement content and conformation to the JMF within the tolerances allowed in Section 304.32 shall be in accordance with Subsection 903.03 Subparts (A), (B), and (C).

Transportation and Delivery of Mixture.

Transportation and delivery of the mixture shall conform to Subsection 404.16.

Spreading and Finishing.

Spreading and finishing the mixture shall conform to Subsection 404.17 except that paving full width of the roadway and paving in echelon need not apply. The mixture shall be placed and compacted in one lift. No tack coat shall be placed between subsequent layers or to the surface of the drainage layer prior to placement of the subsequent lifts of hot asphalt mix.

Compaction.

Three-wheeled or vibratory rollers conforming to Subsection 404.09 shall be used.

After the Asphalt-Stabilized Open-Graded Drainage Layer material has been spread and struck off within the specified compaction temperature range, it shall be compacted thoroughly and uniformly with rollers conforming to Subsection 404.09. Rolling procedures shall be monitored daily using a thin lift nuclear gauge according to ASTM D2950 to determine the optimum number of passes to attain the ultimate field density without aggregate fracture or mix segregation.

The surface shall be rolled when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking or shoving.

Rolling shall begin at the sides and progress gradually to the center, except that on super-elevated curves, rolling shall progress from the lower to the upper edge parallel to the centerline and uniformly lapping each preceding track until the entire surface has been rolled at least once by the rear wheels.

After the HMA has been spread, struck off, and surface irregularities adjusted, it shall be compacted thoroughly and uniformly with rollers conforming to [Subsection 404.09](#).

Alternate trips of the roller shall be terminated in stops approximately 2 feet from the preceding stop. When paving in echelon, rollers shall not compact within 6 inches of an edge where an adjacent lane is to be placed.

The drive wheels of the rollers shall be toward the paver during compaction operation.

Rollers shall move at a slow but uniform speed. Maximum roller speed shall be 3 miles per hour. Rolling shall be continued until all roller marks are eliminated and the air voids conform to the specified requirements.

Any displacement occurring as a result of reversing of the direction of a roller, or from other causes, shall be corrected at once by the use of lutes and addition of fresh mixture when required. Care shall be exercised in rolling not to displace the line and grade of the edges of the HMA mixture.

If necessary to prevent adhesion of the mixture to the rollers, the wheels shall be kept moistened with water mixed with very small quantities of detergent or other similar material. Excess liquid will not be permitted.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the mixture shall be compacted by a vibratory drum compactor according to [Subsection 404.11](#).

Any mixture that becomes loose, broken, contaminated or clogged with debris, or is in any way defective shall be removed and replaced with fresh hot mixture, which shall be compacted to conform to the surrounding area. Any area showing an excess or deficiency of asphalt binder material shall be removed and replaced.

When the average laydown rate does not exceed 2,000 square yards per hour, initial or breakdown rolling shall be accomplished by at least one three-wheel roller and final rolling shall be accomplished by at least one tandem roller except, if permitted, one vibratory roller, meeting the requirements specified elsewhere herein, may be substituted for both the three-wheel roller and the tandem roller. However, if the vibratory roller does not produce a surface free of roller marks and ridges, a tandem roller shall be used for final rolling.

When the average laydown rate exceeds 2,000 square yards per hour but is less than 4,000 square yards per hour, initial or breakdown rolling shall be accomplished by at least two three-wheel rollers and final rolling shall be accomplished by at least one tandem roller except, if permitted, one vibratory roller, meeting the requirements specified elsewhere herein, may be substituted for one three-wheel roller and the tandem roller. However, if the vibratory roller does not produce a surface free of roller marks and ridges, a tandem roller shall be used for final rolling.

When the average laydown rate exceeds 4,000 square yards per hour, initial or breakdown rolling shall be accomplished by at least three, three-wheel rollers and final rolling shall be accomplished by at least two tandem rollers except, if permitted, one vibratory roller, meeting the requirements specified elsewhere herein may be substituted for one three-wheel roller and one tandem roller, or two such vibratory rollers may be substituted for two three-wheel rollers and the two tandem rollers. However, if the vibratory roller does not produce a surface free of roller marks and ridges, a tandem roller shall be used for final rolling.

Demonstrate compaction capability for a particular vibratory roller as directed. During compaction with the vibratory roller, if there is excessive aggregate fracture or crushing, lateral displacement or compaction waves, the vibratory roller will not be approved.

Rideability Requirements.

The surface will be tested using a Rolling Straightedge at selected locations. The variation of the surface from the testing edge of the straightedge between two contacts with the surface shall at no point exceed 3/8 inch in 10 feet. All humps or depressions exceeding 3/8 inch shall be corrected by removing the defective work and replacing it with new material. The rutting tolerance shall be 3/8 inch.

Thickness Requirements.

The thickness of the asphalt-stabilized open-graded drainage layer shall be plus or minus 0.25 inches of the specified thickness.

Maintenance Under Traffic.

During the construction of the asphalt-stabilized open-graded drainage layer, and until the contractor has entirely covered the asphalt-stabilized open-graded drainage layer with pavement, it shall be the Contractor's responsibility to maintain drainage of the job site such that fine material is not allowed to wash into and clog any part of the drainage system. Any area of the asphalt-stabilized open-graded drainage layer for which the drainage becomes impaired during construction, shall be reconstructed at no additional cost to the State.

Only that equipment necessary for the construction of the next higher pavement course shall be allowed on the asphalt-stabilized open-graded drainage layer.

COMPENSATION

Method of Measurement.

The asphalt-stabilized open-graded drainage layer will be measured by the ton as specified in Subsection 404.26, complete and in place.

No asphalt price adjustment will be made for the asphalt-stabilized open-graded drainage layer.

The prime coat will be measured in accordance with Subsection 404.26.

Basis of Payment.

Payment will be made under:

Pay Item
ASPHALT-STABILIZED OPEN-GRADED DRAINAGE LAYER

Pay Unit
TON

SECTION 305 – CONCRETE BASE COURSE

305.05 Opening to Traffic.

THIS SUBSECTION IS CHANGED TO:

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

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 °F 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./yd² 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.

A materials transfer vehicle (MTV) is required for the construction of all pavement courses in the Traveled Way. The following structures may be traversed by a loaded MTV at a travel speed of no more than 5 mph:

STRUCTURE NO.:	NAME:
2010-175	Route I-78 WB Local over Springfield Avenue
2011-154	Route I-78 over Stuyvesant Avenue
2011-155	Route I-78 over Walker Avenue

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.

THE FOLLOWING IS ADDED AFTER THE SIXTH PARAGRAPH

Contractor must use echelon paving during stage 1 (Express Roadway) construction. Contractor shall use echelon paving if possible during stage 3 (Local Roadway) construction.

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 eighth 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 $2\frac{1}{4}$ inches. A vertical edge joint will be permitted for lift thickness $2\frac{1}{4}$ inches or less when traffic has to be maintained. For lift thickness greater than $2\frac{1}{4}$ 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 $\frac{1}{4}$ 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 an eighth of an inch) than the previously placed adjoining mat. If the

newly compacted mat results in a depression at the joint of $\frac{1}{8}$ 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 THIRTEENTH PAY ITEM IN THIS FIRST PARAGRAPH IS CHANGED TO:

CORE SAMPLES, HOT MIX ASPHALT UNIT

THE FOLLOWING NEW PAY ITEM IS ADDED:

Pay Item POLYMERIZED JOINT ADHESIVE *Pay Unit* LINEAR FOOT

THE FOLLOWING PAY ITEM IS DELETED:

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

SECTION 405 – CONCRETE SURFACE COURSE

405.08 Mixing Concrete.

1. Mixing on the Project in Truck Mixers.

THIS FIRST SENTENCE IN THE FIFTEENTH PARAGRAPH IS CHANGED TO:

Each batch shall be mixed not less than 50 revolutions at the rate of rotation designated as mixing speed.

3. Transit Mixing.

THE NINTH PARAGRAPH IS CHANGED TO:

Mixing shall begin immediately following the complete charging of the drum and continue for not less than 50 revolutions of the drum at the mixing speed recommended by the manufacturer of the truck mixer. Upon completion of at least the minimum number of mixing revolutions at the plant, the speed of the drum shall be reduced to the agitation speed recommended by the manufacturer.

THE LAST PARAGRAPH IS CHANGED TO:

Transit mix concrete will be rejected for any of the following reasons:

- a. If the concrete is not discharged within the specified time limit after loading all ingredients into the drum;
- b. If the indicator on the counter shows that the instrument has been turned off or tampered with;
- c. If the non-resettable total revolution counter shows more than 300 revolutions;
- d. If water has been added while the truck mixer is en route to the Project. Two-way telephone or radio communication between the site of the placement of concrete and the batching plant shall be provided.

405.24 Method of Measurement.

THE FOLLOWING IS ADDED:

Saw cut grooved bridge approach slabs will be measured by the square yard of surface area actually grooved.

405.25 Basis of Payment.

THE FOLLOWING NEW PAY ITEMS ARE ADDED:

<i>Pay Item</i>	<i>Pay Unit</i>
BRIDGE APPROACH SLABS	CUBIC YARD
SAW CUT GROOVED BRIDGE APPROACH SLABS	SQUARE YARD

THE FOLLOWING PAY ITEMS ARE DELETED:

BRIDGE APPROACH SLABS, _____" THICK	SQUARE YARD
SAW CUT GROOVED BRIDGE APPROACH AND TRANSITION SLABS	SQUARE YARD

THE FOLLOWING IS ADDED AT THE END OF THIS SUBSECTION:

Separate payment will not be made for the reinforcement steel bars used in the bridge approach slabs. All costs thereof shall be included in the price bid for Bridge Approach Slabs.

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

406.13 Surface Course Rideability Requirements.

THE HEADING AND THE ENTIRE SUBSECTION IS CHANGED TO:

406.13 Acceptance of Surface Course Rideability.

1. General Requirements. The HMA surface course placed in the traveled way at locations indicated in the Special Provisions will be evaluated in terms of the International Roughness Index (IRI) as defined in ASTM E 1926, Standard

Practice for Computing International Roughness Index from Longitudinal Profile Measurements. Provided the requirements for localized roughness in Subpart 3(c) are met, ride quality acceptability will be judged in terms of percent defective (PD), defined as the percentage of work falling outside specification limits. The measured PD will be used to compute the appropriate pay adjustment, which may be positive for superior quality work, or negative for defective work.

2. Specific Requirements. For interstates, freeways, or other controlled-access arterial roadways, the PD will be calculated using an upper IRI limit of $U = 70$ inches/mile. For all others, the upper limit is $U = 90$ inches/mile.

(a) Acceptance will be based on lots of 0.1-mile length in a single lane. In certain cases, irregular lots of other than 0.1-mile length will be evaluated as described in Subpart 6(f).

(b) To be judged acceptable, no more than $PD = 10$ percent of the work shall fall outside specification limits.

(c) For PD values less than 10 percent, the work is eligible for some degree of bonus payment in excess of the contract price.

(d) For PD values exceeding 10 percent, the work will be assessed an increasing amount of pay reduction.

(e) At extremely low levels of quality ($PD \geq 90$), the NJDOT may require corrective action or removal and replacement at the Contractor's expense. If the NJDOT elects not to enforce this option, the pay adjustment will be computed as specified in Subpart 6.

3. Smoothness Measurement.

(a) **Mainline Paving.** The HMA surface course will be tested for ride quality with a Class 1 Inertial Profiling System as defined in AASHTO Designation MP 11, Standard Equipment Specification for Inertial Profiler, approved in accordance with NJDOT Test Method R-1, Calibration/Verification and Operational Procedures for NJDOT, Consultant-Owned, and Contractor-Owned Profilers.

The full extent of the lot will be tested in the direction of travel. The transverse location of the test will be in the wheel paths of vehicular travel, and all designated travel lanes will be tested. The single IRI value reported for each 0.01-mile segment of pavement will be the average of three repeat runs for both the left and right wheel paths.

In the event required staged construction activities result in a rougher than desired intermediate layer prior to placement of the surface course, the Engineer may require profile milling of the intermediate layer.

(b) **Other Areas.** Instead of the above, a 10-foot straightedge shall be used for the following areas: transverse profile of the finished riding surface, shoulders, intermediate paving layers, fractional lots less than 0.03-mile in length, and any other areas so designated in the Special Provisions. Any areas that have more than a 1/8-inch deviation between any two contact points of the straightedge shall be corrected by the Contractor in a manner approved by the Engineer. Following correction, the area will be retested to verify compliance.

(c) **Localized Roughness.** If any individual 0.01-mile segment of pavement, measured as described in Subpart 3(a), exceeds an IRI value of 100 inches/mile for interstates, freeways, or other controlled-access arterial roadways, or 120 inches/mile for all other types of projects, the segment will be deemed an area of localized roughness and will require corrective action by the Contractor and as approved by the Engineer. If the corrective action is not successful or deemed unattainable, the Engineer will assess a \$500 pay reduction per incident. Lots containing localized roughness are also subject to the pay adjustments determined in Subpart 6. except that only the greater pay reduction from either Subpart 3 (c) or 6(f) will be applied. Corrective action locations will not receive bonus payments.

4. Control Testing. Control testing during placement shall be conducted as necessary to assure compliance with the specified surface requirement. An approved Walking Profiler, lightweight profiler, or high-speed profiler may be used for this purpose.

5. Preparation for Acceptance Testing. The Contractor shall provide the necessary traffic control when profiler devices are used and perform any required sweeping of the surface course prior to acceptance testing. Approved reflective traffic tape shall be placed transverse to the centerline across all travel lanes to be measured. The tape shall be placed at the beginning and end of paving, bridge decks, and other locations as directed.

6. Lot Acceptance and Payment. For each 0.1-mile lot, there will be 10 individual IRI measurements as described in Subpart 3(a). For fractional lots, there will be fewer than 10 test results. At the discretion of the Engineer, testing of lots less than 0.03 mile in length may be waived or accomplished as described in Subpart 3(b).

(a) Compute the sample mean (\bar{X}) and standard deviation (S) of the N test results (X1, X2, XN):

$$\bar{X} = (X1 + X2 + \dots + XN) / N \quad (\text{Eq. 1})$$

$$S = \{[(X1 - \bar{X})^2 + (X2 - \bar{X})^2 + \dots + (XN - \bar{X})^2] / (N - 1)\}^{1/2} \quad (\text{Eq. 2})$$

Note: Raising to the 1/2 power is the same as taking the square root.

(b) Compute the quality index (Q):

$$Q = (U - \bar{X}) / S \quad (\text{Eq. 3})$$

in which U is the upper limit defined in Subpart 2.

(c) Determine percent defective (PD). Using Table 914-5 for the appropriate sample size (N), determine the percentage (PD) of the lot that is outside the upper specification limit (U) specified in Subpart 2.

(d) Retest provision. If the PD value determined in Step (c) above equals or exceeds the retest limit of $PD_{\text{Retest}} \geq 50$, the NJDOT has the option of performing a retest of the lot in question. If there is definite evidence that the initial test is invalid, the initial test will be disregarded, the retest will be performed, and will assume the status of an initial test. If there is no evidence that the original test was invalid, and the NJDOT elects to perform the retest, the PD values from the initial test and the retest will be averaged to determine the final result.

(e) Rejection provision. If after an initial test, the PD value determined in Step (c) above equals or exceeds the rejectable quality level of $PD_{\text{Reject}} \geq 90$, the NJDOT will retest the lot. If there is definite evidence that the initial test is invalid, the retest assumes the status of an initial test, and an additional test will be performed before the lot is declared rejectable. If the final PD value equals or exceeds the reject value of $PD_{\text{Reject}} \geq 90$, the lot is declared rejectable and the NJDOT has the option to require removal and replacement at the Contractor's expense, or may allow the Contractor to submit a plan for corrective action. If the plan for corrective action is deemed unsatisfactory, the NJDOT may require removal and replacement, or may allow the lot to remain in place and receive the pay adjustment computed with Equation 6 in Step (f). If the plan for corrective action is accepted and the lot is reworked by the Contractor, it will be tested and evaluated as a new lot.

(f) Compute pay adjustment. Pay equations 4 - 6 express the pay adjustment in dollars per lane per 0.1 mile. For lots of any other length, the pay adjustment is scaled up or down in proportion to the actual length of the lot.

$$\text{PD} \leq 10: \quad PA = \$1000 - \$100 \times \text{PD} \quad (\text{Eq. 4})$$

$$10 < \text{PD} < 90: \quad PA = \$250 - \$25 \times \text{PD} \quad (\text{Eq. 5})$$

$$\text{PD} \geq 90: \quad PA = \$70,000 - \$800 \times \text{PD} \quad (\text{Eq. 6})$$

For this Project, the payment reduction provisions applies to the traveled way of all mainline pavement.

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 (\bar{X}) and the standard deviation (S) of the N Test Results (X1, X2,..., XN):

$$\bar{X} = \frac{X1 + X2 + \dots + XN}{N}$$

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

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 = (\bar{X} - T_{all})/S, where "Q" is the quality index and T_{all} is the minimum allowable thickness from the following table:

<u>HMA Designation</u>	<u>Minimum Allowable Compacted Lift Thickness (T_{all})</u>
<u>Nominal Maximum Aggregate Size of Mix</u>	
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, rideability, 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 12.5H76 Surface Course, Superpave Hot Mix Asphalt 19.0H76 Intermediate Course, and Superpave Hot Mix Asphalt 25H64 Base Course.

DIVISION 500 - BRIDGES AND STRUCTURES

SECTION 508 - METAL BRIDGE RAILING AND FENCE

508.01 Description.

DELETE THE FIRST PARAGRAPH AND REPLACE WITH THE FOLLOWING:

This work shall consist of the removal and disposal of existing metal rail and post elements, and the fabrication and construction of a galvanized 4-Bar Open Steel Bridge Railing System on a bridge.

508.04 Construction Requirements.

DELETE THE FIRST THREE PARAGRAPHS AND REPLACE WITH THE FOLLOWING:

Existing aluminum posts and aluminum or steel rail elements shall be removed and properly disposed of. Care shall be taken during removal of the existing aluminum posts so as not to damage the existing post anchor bolts.

All railing posts shall be vertical. The base plates of the new posts shall be attached to the tops of the parapets using the existing anchor bolts.

508.05 Steel Railing.

A. Fabrication and Erection.

ADD THE FOLLOWING TO THE END OF THE FIRST PARAGRAPH:

Railing and posts shall be galvanized in accordance with Section 917.12.

SECTION 518 - BRIDGE DECK REHABILITATION

518.01 Description.

THE FOLLOWING IS ADDED:

E. Miscellaneous Repairs. This work shall consist of the removal and disposal of loose and disintegrated concrete, the preparation of the surface, cleaning or replacement of existing reinforcement steel, application of epoxy bonding coat, and placing of concrete patch materials.

F. Deck Joint Reconstruction. This work shall consist of the removal and disposal of concrete along the deck joint within the limits shown on plan, removal and disposal of existing preformed bituminous joint filler and/or preformed elastomeric joint sealer, blocking for preformed elastomeric joint sealer, cleaning or replacement of existing reinforcement steel, installation of new reinforcement bars and preformed bituminous joint filler, the preparation of the surface, application of epoxy bonding coat, and placing of concrete patch materials

518.02 Materials.

A. Repair of Concrete Deck.

THE SECOND "OTHER MATERIALS" REFERENCE IS CHANGED TO:

Epoxy Bonding Coat912.06

THE FIRST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

To verify the approved product listing of quick-setting patching materials that may be used, 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>

THE FOLLOWING IS ADDED:

ROUTE I-78 LOCAL AND EXPRESS - CONTRACT A
CONTRACT NO. 050003731
UNION TOWNSHIP, UNION COUNTY

- E. **Miscellaneous Repair.** Materials shall conform to Subsection 518.02, Item (A).
- F. **Deck Joint Reconstruction.** Materials shall conform to Subsection 518.02, Item (A).

CONSTRUCTION

518.04 Repairs of Concrete Deck

CHANGE SUBSECTION HEADING TO:

518.04 Repairs of Concrete Deck, Miscellaneous Repairs and Deck Joint Reconstruction

- A. **Repairs of concrete deck are classified as follows:**
THIS SUBSECTION IS DELETE
- B. **Repairs of concrete decks shall conform to the following:**
 - 2. **Construction Procedures.**
REPLACE THIS SUBSECTION WITH THE FOLLOWING:

Repair areas shall be saw cut to a ¾-inch depth before scarification, if scheduled, and before removal of deteriorated concrete in the designated areas.

During removal for full depth repairs, temporary shielding shall be provided to prevent debris from falling below the deck.

All loose and disintegrated concrete shall be removed from the areas to be repaired in such a manner and to such an extent as to expose a sound concrete surface. Sound concrete (beneath the disintegrated concrete) shall be removed for a depth of not less than ¼ inch and not more than 1 inch, and the remainder of the area and all exposed reinforcement shall be cleaned and roughened by sandblasting. The work shall be done in such a manner as not to damage the concrete that is to remain.

Removal of concrete or preparing and shaping areas to be repaired may be performed by power chipping or hand tools, except that pneumatic hammers heavier than nominal 30-pound class (33 pounds maximum) will not be permitted. Pneumatic hammers and chipping tools shall not be operated at an angle exceeding 45 degrees relative to the surface of the deck slab. Such tools may be started in the vertical position but must be immediately tilted to a 45-degree operational angle. Pneumatic hammers heavier than nominal 15-pound class (20 pounds maximum) will not be permitted for chipping areas directly below the top longitudinal reinforcing steel or in areas adjacent to primary girder reinforcement steel, such as stirrups in prestressed concrete girder configurations. Technical data sheets for pneumatic hammers intended for use shall be submitted at the preconstruction meeting for approval.

Hand chipping methods shall be used to remove concrete adjacent to exposed reinforcing steel. Care shall be taken so as not to damage or debond the reinforcement steel, or to shatter the concrete beyond the area to be repaired.

All corroded reinforcing bars shall be cleaned by sandblasting, waterblasting, or wire brushing. Those bars that have lost 25 percent or more of their original cross-sectional area shall be supplemented by splicing in new epoxy-coated reinforcement steel of the same diameter. In supplementing existing bars, they shall be lapped at least 30 bar diameters and wired together. If necessary, additional chipping of concrete shall be done to provide for this lap. Where reinforcement is broken or missing, new bars shall be lapped at least 30 bar diameters on each side of the break. A minimum of 1 inch clearance around the bar is required except where lower bar mats make this impractical. In the concrete removal operation, if the epoxy-coated reinforcement is damaged, the reinforcement shall be repaired according to AASHTO M 284 at no cost to the Department.

In areas of full depth repairs, forms shall be provided to enable placement of the concrete or quick-setting patch material. These forms may be suspended from existing reinforcing bars by

wire ties for small areas, and in the case of large area openings, they shall be supported by blocking from the beam flanges.

The sides of the concrete at the location of full depth repairs shall be inclined so that the top area of the repair is larger than the bottom.

When Class A concrete is specified for repairs, all operations shall conform to the applicable provisions of [Section 501](#) and the following:

- a. An epoxy bonding coat shall be applied to the surface of sound concrete in the repair area just before placing the Class A concrete. The epoxy bonding coat shall not be allowed to completely dry before the placement of the Class A concrete. To assure a proper bond, the consistency of the coating shall be tacky to the touch. If the coating has completely dried, it shall be roughen, by whatever means chosen by the Contractor, to the satisfaction of the Engineer. The epoxy bonding coat shall then be reapplied.
- b. Traffic, equipment, or other loading will not be permitted on the deck slab when Class A concrete is used as a patch material until the concrete has cured 72 hours and the minimum strength for an additional individual test as defined in [Section 914](#) exceeds 4,000 pounds per square inch from two cylinders cast during placement. When Class A concrete is used, the repair areas shall be cured according to the provisions of [Subsection 518.06.C.12](#), for the 72 hour period. An air cure period will not be required.

THE FOLLOWING IS ADDED:

C. Miscellaneous Repair and Deck Joint Reconstruction shall conform to the following:

1. Construction Procedures. All loose and disintegrated concrete shall be removed from the areas to be repaired in such a manner and to such an extent as to expose a sound concrete surface. Sound concrete (beneath the disintegrated concrete) shall be removed for a depth of not less than ¼ inch and not more than 1 inch, and the remainder of the area and all exposed reinforcement shall be cleaned and roughened by sandblasting. The work shall be done in such a manner as not to damage the concrete that is to remain.

Removal of concrete or preparing and shaping areas to be repaired may be performed by power chipping or hand tools, except that pneumatic hammers heavier than nominal 30-pound class (33 pounds maximum) will not be permitted. Pneumatic hammers and chipping tools shall not be operated at an angle exceeding 45 degrees relative to the surface of the deck slab, concrete median, or concrete curb. Such tools may be started in the vertical position but must be immediately tilted to a 45-degree operational angle. Pneumatic hammers heavier than nominal 15-pound class (20 pounds maximum) will not be permitted for chipping areas directly below the top longitudinal reinforcing steel or in areas adjacent to primary girder reinforcement steel, such as stirrups in prestressed concrete girder configurations. Technical data sheets for pneumatic hammers intended for use shall be submitted at the preconstruction meeting for approval.

Hand chipping methods shall be used to remove concrete adjacent to exposed reinforcing steel. Care shall be taken so as not to damage or debond the reinforcement steel, or to shatter the concrete beyond the area to be repaired. Care shall be taken so as to prevent damage to existing sound concrete, reinforcement steel, or other embedded items encountered during concrete removal, such as conduit and junction boxes. Damage to such features shall be repaired by the Contractor as directed by the Engineer at no additional cost to the NJDOT.

All corroded reinforcing bars shall be cleaned by sandblasting, waterblasting, or wire brushing. Those bars that have lost 25 percent or more of their original cross-sectional area shall be supplemented by splicing in new epoxy-coated reinforcement steel of the same diameter. In supplementing existing bars, they shall be lapped at least 30 bar diameters and wired together. If necessary, additional chipping of concrete shall be done to provide for this lap. Where reinforcement is broken or missing, new bars shall be lapped at least 30 bar diameters on each side of the break. A minimum of 1 inch clearance around the bar is required except where lower bar mats make this impractical. In the concrete removal operation, if the epoxy-coated reinforcement is damaged, the reinforcement shall be repaired according to AASHTO M 284 at no cost to the Department.

Class A concrete shall be used in all repairs and all operations shall conform to the applicable provisions of [Section 501](#) and the following:

An epoxy bonding coat shall be applied to the surface of sound concrete in the repair area just before placing the Class A concrete. The epoxy bonding coat shall not be allowed to completely dry before the placement of the Class A concrete. To assure a proper bond, the consistency of the coating shall be tacky to the touch. If the coating has completely dried, it shall be roughen, by whatever means chosen by the Contractor, to the satisfaction of the Engineer. The epoxy bonding coat shall then be reapplied.

518.08 Method of Measurement.

THE FOLLOWING IS ADDED:

Miscellaneous Repair will not be measured and payment will be made on a Lump Sum basis.

Deck Joint Reconstruction will be measured by the linear foot, measured along one side of the centerline of joint.

518.09 Basis of Payment.

THE FOLLOWING IS DELETED:

REPAIR OF CONCRETE DECK, TYPE ____ SQUARE FOOT

THE FOLLOWING IS ADDED:

REPAIR OF CONCRETE DECK SQUARE FOOT
DECK JOINT RECONSTRUCTION LINEAR FOOT
MISCELLANEOUS REPAIRS LUMP SUM

DIVISION 600 - INCIDENTAL CONSTRUCTION

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.

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.

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.

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

SECTION 603 - INLETS AND MANHOLES

603.10 Reconstruction, Conversion, and Cleaning of Existing Structures.

B. Reconstructing Inlets and Manholes

THE FOLLOWING IS ADDED

Reconstructed Inlets, Type S-1, includes two new castings in accordance with the construction detail as shown on the plans.

603.13 Basis of Payment.

THE FOLLOWING PAY ITEM IS ADDED:

RECONSTRUCTED INLETS, TYPE S-1	UNIT
RECONSTRUCTED INLETS, TYPE S-2, USING EXISTING CASTING	UNIT
INLETS, TYPE AB-MODIFIED	UNIT

SECTION 612 – BEAM GUIDE RAIL

612.08 Beam Guide Rail on Bridges.

REPLACE THIS SECTION WITH THE FOLLOWING:

Beam guide rail consisting of a steel rail element mounted on bridge structures shall utilize epoxy-grouted anchors approved by the Department.

The holes in the parapets for anchor bolts shall be core drilled with a core drill bit. Core drill bit sizes for anchor bolt holes shall conform to manufacturer’s recommendations. Holes shall be spaced and located to clear existing reinforcement, deck joints, conduits, and junction boxes. Anchor bolts shall be fastened to the concrete according to the manufacturer’s recommendations.

Precautions shall be taken so that concrete and existing utility conduits are not damaged during the drilling for anchor bolts. Any damage to the existing concrete shall be repaired without additional compensation.

Welding shall conform to the ANSI/AASHTO/AWS D1.5 Bridge Welding Code with the exception that the welding of tubular structures shall be done according to the ANSI/AWS D1.1 Structural Welding Code.

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.)

617.04 General.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The contractor must maintain 5 lanes of traffic in each direction after Stage 1 is complete, as well as all ramps and slip ramps, between November 15, 2006 and March 15, 2007.

The contractor must not shift traffic in preparation for Stage 2A nor should he start Stage 2A until March 15, 2007.

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 °F and when the ambient temperature is 50 °F 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.

617.17 Basis of Payment.

DELETE THE FOLLOWING PAY ITEM:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVABLE PAVEMENT MARKING TAPE	LINEAR FOOT

ADD THE FOLLOWING PAY ITEM:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVABLE WET WEATHER PAVEMENT MARKING TAPE	LINEAR FOOT

SECTION 618 - TRAFFIC STRIPES AND MARKINGS

618.01 Description.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Removal of pavement reflectors and castings consists of the removal and disposal of existing raised pavement markers, including the lense when still intact.

Removal and replacement of pavement reflector lenses consists of the removal of existing pavement reflector lenses and installing new mono-directional or bi-directional pavement reflector lenses.

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.

618.08 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 °F, to thoroughly dry surfaces and during anticipated dry weather, when the ambient and surface temperatures are a minimum of 50 °F. 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	Yellow
	(Millicandelas per square foot per footcandle)	(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 TEXT 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.

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.

618.15 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE ADDED:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVAL OF PAVEMENT REFLECTORS AND CASTINGS	UNIT
TRAFFIC STRIPES, LONG LIFE, PREFORMED TAPE	LINEAR 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.

619.04 Guide Signs.

THE FIRST PARAGRAPH IS CHANGED TO:

Guide signs fabricated of extruded aluminum sheets shall be covered with ASTM D 4956, TYPE III, Type VIII or Type IX retroreflective sheeting depending on the following:

1. Guide signs on steel "U" posts 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.
2. Guide signs on overheads and breakaway or non-breakaway posts shall be fabricated of extruded aluminum panels covered with ASTM D 4956 Types VIII or IX retroreflective sheeting. Legends, borders, and accessories shall be Type A.

THE FOLLOWING IS TO BE ADDED TO THIS SECTION

RESET SIGNS, USING EXISTING POST

619.01 Description

This work shall consist of removing sign panels and support assemblies from locations shown on the plans and reinstalling the sign panels with existing posts at the same locations, conforming to Sections 619 and 201.

Removal of the signs shall conform to the plans and Section 201. Positioning/mounting of the signs shall conform to the plans and Sections 619.03 and 619.04

Sign Supports shall meet current NJDOT standards.

Cleaning of the signs shall conform to Section 619.05

COMPENSATION

619.05 Method of measurement

RESET SIGNS, USING EXISTING POST will be measured by the number of signs reset.

619.06 Basis for payment

Payments will be made under:

<i>Pay Item</i>	<i>Pay Unit</i>
RESET SIGNS, USING EXISTING POST	UNIT

RESET SIGNS, WITH BREAKAWAY SUPPORT

619.01 Description

This work shall consist of removing sign panels and support assemblies from locations shown on the plans and reinstalling the sign panels with breakaway supports at the same locations, conforming to Sections 619 and 201.

Removal of the signs shall conform to the plans and Section 201. Positioning/mounting of the signs shall conform to the plans and Sections 619.03 and 619.04

Sign Supports shall meet current NJDOT standards.

Cleaning of the signs shall conform to Section 619.05

COMPENSATION

619.07 Method of measurement

RESET SIGNS, WITH BREAKAWAY SUPPORT will be measured by the number of signs reset.

619.08 Basis for payment

Payments will be made under:

<i>Pay Item</i>	<i>Pay Unit</i>
RESET SIGNS, WITH BREAKAWAY SUPPORT	UNIT

SECTION 620 - DELINEATORS

620.03 Ground Mounted Flexible Delineators.

THE SECOND PARAGRAPH IS CHANGED TO:

Retroreflective sheeting, ASTM D 4956 Types VII or VIII shall be pre-applied to the front (surface facing traffic) of the unit by the manufacturer. The retroreflective sheeting shall cover a minimum area of 3 by 12 inches, beginning a maximum of 2 inches from the top of the post. The color shall be white when the delineator is located on the right side to the direction of traffic and shall be yellow when the delineator is located on the left side to the direction of traffic.

620.04 Guide Rail Mounted Flexible Delineators.

THE SECOND PARAGRAPH IS CHANGED TO:

Retroreflective sheeting, ASTM D 4956 Types VII or VIII shall be applied to the upper portion of the flexible delineator panel. The retroreflective sheeting shall cover a minimum area of 4 ½ by 4 ½ inches (4 ½ by 9 inches for deceleration and acceleration lanes). The color shall be white when the delineator is located on the right side to the direction of traffic and shall be yellow when the delineator is located on the left side to the direction of traffic.

620.05 Barrier Curb Mounted Flexible Delineators.

THE THIRD PARAGRAPH IS CHANGED TO:

Retroreflective sheeting, ASTM D 4956 Types VII or VIII shall be applied to the upper portion of the flexible delineator panel facing traffic and perpendicular to the top of the concrete barrier curb. The retroreflective sheeting shall cover an area of 3 ½ by 3 ½ inches. The color shall be white when the delineator is located on the right side to the direction of traffic and shall be yellow when the delineator is located on the left side to the direction of traffic.

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.

THE FOLLOWING IS ADDED:

This work shall consist of furnishing and installing new steel covers, gaskets and screws on bridge curb junction boxes as shown on the plans and in accordance with these specifications.

701.02 Materials and Equipment.

THE WEBSITE IN THE LAST PARAGRAPH IS CHANGED TO:

<http://www.state.nj.us/transportation/eng/>

THE FOLLOWING IS ADDED:

The steel junction box covers shall be a minimum 0.25 inch steel conforming to the requirements of ASTM - A36 and shall be hot-dip galvanized conforming to the requirements of ASTM - A123. The dimensions of the cover shall be the same as those being replaced. The covers shall be attached with stainless steel socket cap screws of the size and dimension required to match existing cast iron junction boxes.

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.

701.09 Junction Boxes

THE FOLLOWING IS ADDED:

New steel junction box covers shall be furnished and installed at the locations indicated on the Plans or as directed by the Engineer. Prior to installing the new cover, all dirt and debris within existing junction boxes shall be removed and disposed of by the Contractor. Any screws broken off in existing junction boxes shall be drilled out and new threads shall be tapped in the hole and a matching cover screw shall be installed.

701.19 Method of Measurement.

THE FOLLOWING IS ADDED:

Replace curb junction box cover will be measured for payment by the number of units (covers) replaced, complete and accepted in place.

701.20 Basis of Payment.

THE FOLLOWING IS ADDED:

REPLACE CURB JUNCTION BOX COVER

UNIT

SECTION 703 – HIGHWAY LIGHTING

703.02 Materials and Equipment

THE FOLLOWING IS ADDED:

Provide materials meeting the applicable sections of Section 703.02. New material is not required as long as the performance is acceptable. Provide Creosote, Penta, CCA or equivalent wood poles as permitted meeting environmental requirements. Provide either copper or aluminum aerial cable. Provide power supply material meeting NEC and Power Company requirements.

703.03 Temporary Highway Lighting System

THE FOLLOWING IS ADDED:

Description.

This work is the design, construction, maintenance, operation (including providing energy) and removal of the Temporary Highway Lighting System.

It is anticipated that temporary highway lighting will be required at the following locations and during each indicated Traffic Control Staging:

1. Temporary Crossover between Route I-78 W.B. Local Sta. 5380+00 and Route I-78 W.B. Express, Sta. 5400+00 in Stage 2A
2. Temporary Crossover between Route I-78 W.B. Local Sta. 5543+00 and Route I-78 W.B. Express, Sta. 5570+00 in Stage 1

Submit design calculations for each designated area in accordance with the following requirements:

Provide average initial illumination levels of 1.2 footcandles throughout the required project areas. The minimum illumination level shall be 0.30 FC. The average-to-minimum uniformity ratio shall be in the range of 3.0:1 to 4.0:1. Lighting calculations shall be prepared utilizing the “Visual” lighting software.

Prepare and submit for review and approval, a set of 22” x 36” working drawings, in accordance with Section 105.04, showing each proposed light pole location, required circuitry, control cabinet schematic, and location of power supply.

703.04 Construction Requirements

THE FOLLOWING IS ADDED:

Construct and maintain in accordance with the scheme provided under Subsection 701.03. Provide 150, 250 or 400 watt HPS luminaires, M-SC-II conventional (cobra-head) luminaires or offset luminaires, on wood poles at a 35/40 foot

mounting height. Provide cobra-head luminaires with a maximum 15-foot arm length, where required. Limit overhead wiring spans to 250 feet. Guy poles, as necessary. Locate the poles in areas protected from traffic, or provide protection by use of guide rail, crash barrier or other approved devices. Provide luminaires with individual photoelectric control, or provide a main contactor and photocontrol at the main power supply location, or connect to existing lighting circuitry. Ground the lighting system.

703.06 Method of Measurement

THE FOLLOWING IS ADDED:

The Pay Item “Temporary Highway Lighting System” shall be measured by the unit and shall include providing design calculations and working drawings; furnishing, installing and maintaining all equipment and material for the temporary highway lighting system, energy costs, costs associated with the power supply and line extension, and the cost of removing the system.

703.07 Basis of Payment

THE FOLLOWING IS ADDED:

Payment will be made under:

Pay Item
TEMPORARY LIGHTING SYSTEM

Pay Unit
UNIT

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.

SECTION 814 – NONVEGETATIVE SURFACES

THE FOLLOWING IS ADDED TO THIS SECTION:

NON-VEGETATIVE SURFACE, POLYESTER MATTING

Description.

This work shall consist of the construction of non-vegetative surface polyester matting under new or reset guide rail.

Materials.

Polyester matting shall be commercial quality. The matting shall be a composite of polyester base fiber and vinyl chloride resin and shall be permeable to air and water and shall prevent sunlight from reaching the soil. The matting shall contain no herbicides and shall resist ultraviolet light, mildew and algae. The matting shall be self-extinguishing when removed from flame.

The matting shall have a minimum thickness of 0.25”.

Construction Requirements.

Polyester matting shall be placed as recommended by the manufacture. Prior to the installation of the matting a written copy of the manufacturer’s installation recommendations shall be provided to the Engineer.

The surface areas to receive the matting shall be smooth, firm, stable and free of rocks, clods, foliage, roots or other material which might prevent the matting from lying in direct contact with the soil surface. The grass shall be mowed as low as possible and an herbicide shall be applied to the mowed surface. The matting shall lie flat, smooth and in uniform contact with the ground surface without bulges or wrinkles.

The matting shall be placed immediately following the installation of guide rail posts and prior to the installation of the guide rail. After the posts are in place the matting shall be installed by lifting it above the posts and allowing it to drop to the ground with the posts passing through the prefabricated openings in the matting.

The matting shall be staked along the edges of the matting in accordance with the manufacturers’ recommendations.

Each matting opening shall be sealed with a separate prefabricated piece of matting that will provide a snug fit around the post and completely cover the opening.

After the matting is completely installed, as per manufactures recommendations, the entire matting surface shall be treated with a pre-emergence herbicide such as oryzalin, oxadiazon, or trifluralin.

Method of Measurement.

Non-vegetative surface, polyester matting will be measured by the square yard.

Basis of Payment.

Payment will be made under.

Pay Item
NON-VEGETATIVE SURFACE, POLYESTER MATTING

Pay Unit
SQUARE YARD

Separate payment will not be made for manufacturer's required ground preparation under the polyester matting and the application of the herbicide. All cost thereof shall be included in the price bid for polyester matting.

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 903 – HOT MIX ASPHALT

903.01 Composition of Mixtures.

For this Project, the 25 percent or less RAP requirements shall govern.

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 °F 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 908 – JOINT MATERIALS

908.03 Preformed Elastomeric Joint Sealer (Compression Type)

A. Requirements.

THE SECOND SENTENCE IS CHANGED TO:

The material shall conform to the physical properties specified in Table 1 of ASTM D 3542 and as modified herein. The Compression-Deflection properties specified in Table 1 of ASTM 3542 shall be replaced with NJDOT Test Method J-2 as provided within these Specifications. The requirement for Pressure Deflection shall be 3.5 psi.

THE FIRST SENTENCE OF THE FIFTH PARAGRAPH IS CHANGED TO:

The width to height ratio of the compression sealer shall never be less than 90%.

908.05 Strip Seal Expansion Dam.

B. Glandular Type Strip Seal.

1. Scope.

THE FIRST SENTENCE IS CHANGED TO:

This specification covers the material requirements for glandular type strip seal deck joint systems consisting of an extruded neoprene rubber gland seal mechanically locked in the cavities of two parallel steel rail sections.

3. Metal Components and Adhesive.

THE FIRST AND SECOND SENTENCES ARE CHANGED TO:

Steel rail sections shall conform to AASHTO M 270 Grade 36 or 50. Steel for plates, shapes and other structural steel used in the deck joint system shall conform to AASHTO M 270 Grade 36 or 50.

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, 400°F	D 2669	3,000 – 10,000 cp
Cone Penetration, 77°F	D 5329	60-100
Flow, 140°F	D 5329	1/4 inch maximum
Resilience, 77°F	D 5329	30% minimum
Ductility, 77°F	D 113	1 foot minimum
Ductility, 39.2°F	D 113	1 foot minimum
Tensile Adhesion, 77°F	D 5329	500% minimum
Softening Point	D 36	170°F 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 Subsection 106.04.

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
White Pigment.....	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 (Degrees)	Specific Luminance	
	White (Millicandelas per square foot per footcandle)	Yellow (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 (Degrees)	Specific Luminance	
	White (Millicandelas per square foot per footcandle)	Yellow (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.

912.17 Pavement Reflectors and Castings.

THE FOLLOWING IS ADDED:

- 6. **Alternate pavement reflectors and castings.** Alternate pavement reflectors and castings shall be from the NJDOT approved products list maintained by the bureau of materials engineering and testing.

SECTION 914 – PORTLAND CEMENT CONCRETE, MORTOR, AND GROUT

THE TITLE OF THIS SECTION IS CHANGED TO:

SECTION 914 – PORTLAND OR BLENDED HYDRAULIC CEMENT CONCRETE, MORTOR, 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.

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.

E. Acceptance Testing for Strength for Pay-Adjustment Items.

THE ENTIRE TEXT OF THIS SUBPART AFTER THE FIRST PARAGRAPH IS CHANGED TO:

The amount of pay-adjustment in dollars is the product of the Pay Item base price times the lot quantity times the percent pay-adjustment (expressed as a decimal) given by Equation 1 or Equation 2.

Equation 1 and Equation 2:

Quality	Pay-adjustment (Percent)	
PD < 50	PPA = 3.0 - 0.3 PD	Equation 1
PD ≥ 50	PPA = 26.0 - 0.76 PD	Equation 2

Where: PPA = Percent Pay-adjustment
 PD = Percent Defective (Estimate of percent of lot below the class design strength by the use of Equation 3 and Subsection 914.05, Table 914-5)

Equation 3:

$$Q = (ALS - CDS) / S$$

Where: Q = Quality index for pay-adjustment computations
 ALS = Average lot strength in psi
 CDS = Class design strength in psi
 S = Standard deviation of the strength test results in psi for the lot as computed by Equation 4

Equation 4:

$$S = \sqrt{\frac{\sum(X_i - ALS)^2}{N-1}}$$

Where: Σ = Summation
 Xi = Individual test result (average strength of a test cylinder pair)
 N = Number of test results for the lot

Note: When only a single test result is available, the standard deviation "S" is assumed to equal 200 psi.

For lots having percent defective (PD) levels less than 10 percent, Equation 1 provides positive adjustments to the contract price. For lots having exactly 10 percent defective, there is no adjustment to the contract price. For lots having greater than 10 percent defective, Equations 1 or 2, as appropriate, subtract progressively larger amounts from the contract price.

If, based on the initial series of tests, the lot quality of a pay-adjustment item is estimated to be PD = 50 or greater, or if any individual test value (average of a cylinder pair) falls below the retest limit for non-pay-adjustment concrete in Subsection 914.05, Table 914-4, the Engineer has the option to reevaluate by coring or other suitable means. When this provision is applied to Class P concrete, each beam or pile in the steam bed will be evaluated separately.

If the Department elects not to core, the Contractor may accept the pay-adjustment of (PPA) calculated by Equation 2 or, when approved by the Engineer, may take cores according to Subsection 914.05, Table 914-4 at no cost to the Department. The Contractor must take the cores within 60 days from notification of the

option to core. As an aid in making this decision, the Contractor will be permitted to perform nondestructive testing using a method or device approved by the Engineer.

When re-evaluation is accomplished by a method other than coring, the results will be used only to determine what further action is to be taken. If any of the non-core tests results are below the class design strength, the Engineer has the option to core. If this option is waived, the Contractor may elect to core, at no cost to the State and within 60 days after being presented with this option, or to accept the pay-adjustment computed from the initial test cylinder results. If the Contractor elects to core, the coring shall be performed as directed and the Department will test the cores. If none of the non-core test results is below the class design strength, the Engineer may elect either to core or to accept the lot at 100 percent payment.

If, based on the core results, the lot is determined to be at a quality level of $PD < 75$, the pay-adjustment shall be computed by Equation 1 or Equation 2, as appropriate. If the lot is confirmed to be at a quality level of $PD = 75$ or greater, the lot is considered to be rejectable and the Engineer may:

1. Require the Contractor to remove and replace the defective lot at no cost to the State,
2. Allow the Contractor to leave the defective lot in place and receive a percent pay-adjustment (PPA) computed by Equation 2, or
3. Allow the Contractor to submit a plan, for approval, for corrective action to be performed at no cost to the State. If the plan for corrective action is not approved, either option 1 or 2 above may be applied.

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 ES	50
INLET CASTINGS, TYPE ES	40
MANHOLES	30

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.
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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 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.

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. **Flourescent Colors.** The daytime flourescent 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 PARAGRAPHS 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 3/8-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 inlet and manhole castings, grates, extension rings, extension frames and covers 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 (Fe₂O₃).

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 Admixtures8 pounds from each source
Blended Hydraulic CementASTM 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.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained.

The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment

corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has

a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to

skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as

appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

1. Compliance with Copeland Regulations (29 CFR 3):

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof of the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not

ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transac-

tions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT PREFERENCE FOR
APPALACHIAN CONTRACTS**

(Applicable to Appalachian contracts only.)

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph 1c shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph 4 below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification,

(c) the date on which he estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, he shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within 1 week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph 1c above.

5. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these Specifications:
 - a. Covered area means the geographical area in which the Project is located.
 - b. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor or any person to whom the Director delegates authority.
 - c. Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, US Treasury Department Form 941.
 - d. Minority includes:
 - (1) Black (a person having origins in any of the black African racial groups not of Hispanic origin);
 - (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);
 - (3) Asian and Pacific Islander (a person having originals in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan Native (a person having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participating or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. The Contractor shall implement the specific affirmative action standards provided in paragraphs 6a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The

Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

4. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these Specifications, Executive Order 111246, or the regulations promulgated pursuant thereto.
5. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the US Department of Labor.
6. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foreman, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individual working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred back to the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the contractor a minority person or women sent by the Contractor, or when the Contractor

has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the source compiles under 6b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news median, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and females and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (6a through p). The efforts of a Contractor association, joint contractor union, Contractor-Community, or other similar group of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 6A through p of these Specifications provided that the Contractor actively participates in the group, make every effort to assure that the group has a positive impact on the employment of minorities and females in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, make a good faith effort to meet its individual goals and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
8. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women both minority and nonminority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the

Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

9. The Contractor shall not use the goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
10. The Contractor shall not enter any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
11. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246 as amended.
12. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 6 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (such as mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
14. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (such as those under the Public Works Employment Act of 1977 and the community Development Block Grant Program).
15. Noncompliance by the Contractor with the requirements of the Affirmative Action Program for Equal Employment Opportunity may be cause for delaying or withholding monthly and final payments pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL
OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The goals for minority and female participation, in the covered area, expressed in percentage terms for the Contractor's aggregate work force in each trade, on all construction work are as shown on Page 2.

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4. (3) a, and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

2. The Contractor will provide the Department with written notification in triplicate within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification will list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
3. As used in this Notice and in the Contract resulting from this solicitation the covered area is the county or counties in which the Project is located.
4. If a project is located in more than one county, the minority work hours goal, only, will be determined by the county which serves as the primary source of hiring or, if workers are obtained almost equally from one or more counties, the single minority goal will be the average of the affected county goals.

WORK HOUR GOALS IN EACH TRADE FOR MINORITY AND FEMALE
PARTICIPATION

<u>COUNTY</u>	<u>MINORITY PARTICIPATION PERCENT</u>	<u>FEMALE PARTICIPATION PERCENT</u>
Atlantic	18.2	6.9
Bergen	15.0	6.9
Burlington	17.3	6.9
Camden	17.3	6.9
Cape May	14.5	6.9
Cumberland	16.0	6.9
Essex	17.3	6.9
Gloucester	17.3	6.9
Hudson	12.8	6.9
Hunterdon	17.0	6.9
Mercer	16.4	6.9
Middlesex	15.0	6.9
Monmouth	9.5	6.9
Morris	17.3	6.9
Ocean	17.0	6.9
Passaic	12.9	6.9
Salem	12.3	6.9
Somerset	17.3	6.9
Sussex	17.0	6.9
Union	17.3	6.9
Warren	1.6	6.9

STATE OF NEW JERSEY EQUAL EMPLOYMENT OPPORTUNITY
FOR CONTRACTS FUNDED BY FHWA

The parties to this Agreement do hereby agree that the provisions of NJSA 10:2-1 through 10:2-4 and NJSA 10:5-31 et seq (PL 1975, c 127, as amended and supplemented) dealing with discrimination in employment on public contracts, and the rules and regulations promulgated pursuant thereto, are hereby made a part of this contract and are binding upon them.

During the performance of this contract, the Contractor agrees as follows:

- a. The Contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status or sex. The Contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Department Compliance Officer setting forth provisions of this nondiscrimination clause;
- b. The Contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex;
- c. The Contractor of subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Department of Compliance Officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The notices referred to in paragraphs a and c may be obtained from the Supervising Engineer of Construction or his representative at the preconstruction conference.

EMERGING SMALL BUSINESS ENTERPRISE UTILIZATION ATTACHMENT

FHWA FUNDED CONTRACTS

I. UTILIZATION OF EMERGING SMALL BUSINESS ENTERPRISE (ESBE) AS CONTRACTORS, MATERIALS SUPPLIERS AND EQUIPMENT LESSORS.

The New Jersey Department of Transportation (NJDOT) advises each contractor or subcontractor that failure to carry out the requirements set forth in this attachment shall constitute a breach of contract and, after the notification of the applicable federal agency, may result in termination of the agreement or contract by the Department or such remedy as the Department deems appropriate. Requirements set forth in this section shall also be physically included in all subcontracts in accordance with USDOT requirements.

II. POLICY.

It is the policy of the NJDOT that Emerging Small Business Enterprises (ESBE), as defined in Section IV, Part B below, shall have an opportunity to participate in the performance of contracts financed in whole or in part with federal funds. In furtherance of this policy the NJDOT has established an Emerging Small Business Enterprise Program. This program is designed to promote participation and shared economic opportunity by smaller firms who qualify as ESBE's in NJDOT construction contracts and is undertaken pursuant to the authority contained in 23 CFR Part 26.

III. CONTRACTOR'S ESBE OBLIGATION.

The contractor agrees to ensure that ESBE's, as defined in Section IV, Part B below, have an equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with federal funds. In performing work under this agreement with the NJDOT, the contractor shall take all necessary and reasonable steps in accordance with the provisions of this attachment to ensure that ESBE's have the maximum opportunity to compete for and perform contracts. The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of any contract obligation including, but not limited to, its performance of its obligations under this ESBE attachment.

IV. GOALS FOR THIS PROJECT.

- A. This project includes a goal of awarding 08 percent of the total contract value to subcontractors, equipment lessors and/or material suppliers, which qualify as ESBE's.
 - 1. Failure to meet the minimum goal placed on this project, or to provide a good faith effort to meet the minimum goal, may be grounds for rejection of the bid as being non-responsive.

2. As a source of information only, an ESBE Directory is available from the Division of Civil Rights/Affirmative Action. Use of this listing does not relieve the contractor of its responsibility to seek out ESBE's not listed, prior to bid. If a contractor proposes to use an ESBE contractor not listed in the ESBE Directory, the proposed ESBE firm must submit a completed certification application to the Division of Civil Rights/Affirmative Action, fifteen (15) days prior to bid date.

B. DEFINITIONS.

1. Emerging Small Business Enterprise is defined as: a for-profit business concern classified as a small business pursuant to the appropriate Small Business Administration regulations, and which is owned and controlled by individuals who do not exceed the personal net worth criteria (\$750,000) established in 49 CFR Part 26.
2. Owned and Controlled is defined as: that at least 51% of the ownership interests as well as the management and daily business operations of the firm reside in individuals whose personal net worth does not exceed the requirements established in 49 CFR, Part 26.

V. COUNTING ESBE PARTICIPATION.

- A. Each ESBE is subject to a certification procedure to ensure its ESBE eligibility status prior to the award of contract. In order to facilitate this process it is advisable for the bidder to furnish names of proposed ESBE's to the Department 15 days before bid opening. Once a firm is determined to be a bona fide ESBE by the Division of Civil Rights/Affirmative Action, the total dollar value of the contract awarded to the ESBE is counted toward the applicable goal.
- B. The contractor may count toward its ESBE goal only expenditures to ESBE's that perform a commercially useful function in the work of a contract. An ESBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibility by actually performing, managing and supervising the work involved. To determine whether an ESBE is performing a commercially useful function, the contractor shall evaluate the amount of work contracted, industry practice and other relevant factors.
- C. If a ESBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the ESBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, you must presume that it is not performing a commercially useful function.

- D. If the prime contractor is a certified ESBE, payments made to the contractor for work performed by the contractor will be applied toward the ESBE goal. Payments made to the prime contractor for work performed by non-ESBE's will not be applied toward the ESBE goal.
- E. The prime contractor may count 60 percent of its expenditures to ESBE suppliers that are not manufacturers, provided that the ESBE supplier performs a commercially useful function in the supply process. The contractor may count 100% of its expenditure to ESBE suppliers who are also manufacturers. Manufacturers receive 100% credit toward the ESBE goal.

VI. GOOD FAITH EFFORT.

To demonstrate sufficient reasonable efforts to meet the ESBE contract goals, a bidder shall document the steps it has taken to obtain ESBE participation, including but not limited to the following:

- A. Attendance at a pre-bid meeting, if any, scheduled by the Department to inform ESBE's of prime contracting and subcontracting opportunities under a given solicitation.
- B. Advertisement in general circulation media, trade association publications, and small business publications for at least 20 days before bids are due. If 20 days are not available, publication for a shorter reasonable time is acceptable.
- C. Written notification to ESBE's that their interest in the contract is solicited;
- D. Efforts made to select portions of the work proposed to be performed by ESBE's in order to increase the likelihood of achieving the stated goal;
- E. Efforts made to negotiate with ESBE's for specific bids including at a minimum:
 - 1. The names, addresses and telephone numbers of ESBE's that were contacted;
 - 2. A description of the information provided to ESBE's regarding the plans and specifications for the work to be performed; and
 - 3. A statement of why additional agreements with ESBE's were not reached;
- F. Information regarding each ESBE the bidder contacted and rejected as unqualified and the reasons for the bidder's conclusion;
- G. Efforts made to assist the ESBE in obtaining bonding or insurance required by the bidder or the department.

NOTE: If the Division of Civil Rights/Affirmative Action determines that the apparent successful low bidder has failed to meet the requirements of this section, the bidder will be afforded the opportunity for an administrative reconsideration of that determination prior to the award or rejection of the contract. As part of the administrative reconsideration process, the bidder will have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. NJDOT will send the bidder a written decision on reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. The result of the reconsideration process is not administratively appealable to the USDOT.

VII. SUBMISSION OF REQUIRED DOCUMENTS.

- A. The following shall be submitted either with the bid or to the Division of Civil Rights and Affirmative Action no later than seven (7) State business days after the date of receipt of bids.
1. ESBE Form "A2" - Schedule of ESBE Participation. List all ESBE's participating in the contract; listing the scope of work, dollar value and percent of total contract to be performed.
 2. Supplement to ESBE Form "A2"- A list of all subcontractors who submitted bids or quotes on this project.
 3. ESBE Form B - Affidavit of Emerging Small Business Enterprise. Each proposed ESBE not listed in the NJDOT ESBE directory must submit Form B attesting to its validity as an ESBE. (All firms must be certified by the Department's ESBE Coordinator prior to award of the contract).
 4. Request for Exemption - In the event that the bidder fails to meet the specified goal, they must submit within Seven State business days of the bid, a written request for exemption to the goal. This request must include a written statement addressing Items A through G in Article VI of this attachment in addition to an accounting of the reason(s) why each items in the bid proposal was not subcontracted. Submittal of such request does not imply departmental approval. An assessment of the material will be conducted by the Department's Division of Civil Rights/Affirmative Action.
 5. The name of the person who is serving as its ESBE Liaison Officer
- B. The State Highway Engineer will be the sole judge of proper compliance and action taken in fulfilling the requirements as set forth herein.

VIII. ESBE LIAISON OFFICER.

- A. The contractor shall designate an ESBE Liaison Officer who shall be responsible for the administration of its ESBE program in accordance with the requirements of this attachment.

IX. OBLIGATIONS AFTER AWARD OF THE CONTRACT.

If at any time following the award of contract, the contractor intends to sublet any portion(s) of the work under said contract, or intends to purchase material or lease equipment not contemplated during preparation of bids, said contractor shall take the following actions:

1. Notify the Resident Engineer, in writing, of the type and approximate value of the work the contractor intends to accomplish by such subcontract, purchase order or lease.
2. Attempt to obtain a qualified ESBE to perform the work.
3. Submit the Post-Award ESBE Certification Form to the Regional Supervising Engineer with his application to sublet or prior to purchasing material or leasing equipment. Post Award ESBE forms may be obtained from the Resident Engineer.

X. CONSENT BY DEPARTMENT TO SUBLETTING.

The Department will not approve any subcontract proposed by the Contractor unless and until said contractor has complied with the terms of this attachment.

XI. SELECTION AND RETENTION OF SUBCONTRACTORS.

- A. The contractor is further obligated to provide the Resident Engineer with a listing of firms, organizations or enterprises solicited and those utilized as subcontractors on the proposed project. Such listing shall clearly delineate which firms are classified as an ESBE.
- B. The contractor shall identify all efforts it made to identify and retain an ESBE as a substitution subcontractor when the arrangements with the original ESBE proved unsuccessful shall be submitted in writing to the Department's ESBE Coordinator for approval. Work in the category concerned shall not begin until such approval is granted in writing.
- C. Notification of a subcontractor's termination will be sent to the Department by the contractor through the Resident Engineer. Said termination notice will state whether the subcontractor is an ESBE and the reason for termination.

XII. CONCILIATION.

Allegations of breach of any obligation contained in these ESBE provisions will be investigated by the Federal Office of Contract Compliance in conjunction with the Division of Civil Rights/Affirmative Action of the New Jersey Department of Transportation and the Federal Highway Administration.

XIII. DOCUMENTATION.

A. The Department or the federal funding agencies may at any time require such information as is deemed necessary in the judgement of the Department to ascertain the compliance of any bidder or contractor with the terms of these provisions.

B. Record and Reports.

The Contractor shall keep such records as are necessary to determine compliance with its Emerging Small Business Enterprise Utilization obligations. The records kept by the contractor will be designed to indicate:

1. The names of ESBE contractors, equipment lessors and material suppliers contacted for work on this project.
 2. Work, services and materials which are not performed or supplied by the prime contractor.
 3. The actual dollar value of work subcontracted and awarded to ESBE's.
 4. Efforts taken in seeking out and utilizing ESBE's. This would include solicitations, quotes and bids regarding project work items, supplies, leases, or other contract items.
 5. Documentation of all correspondence, contacts, telephone calls, or other actions taken to obtain the services of ESBE's on this project.
 6. Records of all ESBE's who have submitted quotes/bids to the contractor on the project.
- C. Submit reports, as required by the Department, on those contracts and other business transactions executed with ESBE's in such form and manner as may be prescribed by the Department.
- D. All such records must be maintained for a period of three (3) years following acceptance of final payment and will be available for inspection by the Department.

XIV. PAYMENT TO SUBCONTRACTORS.

The Contractor agrees to pay its subcontractors in accordance with Subsections 109.05 and 109.07 of the 1996 Standard Specifications, as amended.

XV. NON-COMPLIANCE.

Failure by the bidder to comply with these provisions may result in rejection of the bid. The contractor may further be declared ineligible for future Department contracts.

EQUAL EMPLOYMENT OPPORTUNITY SPECIAL PROVISIONS

1. General

- a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form FHWA-1273) and these Special Provisions which are imposed pursuant to Section 140 of Title 23 USC, as established by Section 22 of the Federal Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the Equal Employment Opportunity requirements set forth in the Required Contract Provisions.
- b. The Contractor will work with the State agencies and the Federal Government in carrying out Equal Employment Opportunity obligations and in their review of activities under the contract.
- c. The Contractor and all subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of Equal Employment Opportunity. The Contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor. (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors).
- d. Noncompliance by the Contractor with the requirements of the Affirmative Action Program for Equal Employment Opportunity may be cause for delaying or withholding monthly and final payments pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

2. Equal Employment Opportunity Policy

The Contractor will accept as its operating policy the following statement which is designed to further the provisions of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and on-the-job training.

3. Equal Employment Opportunity Officer

The Contractor will designate and make known to the Department contracting officers an equal opportunity officer (hereinafter referred to as the EEO Officer) who will have the capability, authority and responsibility to effectively implement and promote an active contractor program of equal employment opportunity.

4. Dissemination of Policy

a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommended such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure compliance, the following minimum actions will be taken:

- (1) An initial project site meeting with key supervisory and office personnel will be conducted before or at the start of work, and then not less than once every 6 months, at which time the Contractor's equal employment opportunity program will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.
- (2) All new supervisory and office personnel will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the Contractor's equal employment opportunity obligations within 30 days following their reporting for duty with the Contractor.
- (3) All personnel engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official concerning the Contractor's procedures for locating and hiring minority and female employees.

b. In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor will take the following actions:

- (1) Notices and posters setting forth the Contractor's equal employment

opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

- (2) The Contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, and/or other appropriate means.

5. Recruitment

- a. When advertising for employees, the Contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer". All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The Contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges and minority-oriented organizations. To meet this requirement, the Contractor will, through his EEO Officer, identify sources of potential minority and female employees, and establish procedures with such sources whereby applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with the equal employment opportunity contract provisions. (The US Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or females, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended).

- c. The Contractor will encourage his present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures pertaining to the referral of applicants will be discussed with employees.

6. Personnel Actions

Wages, working conditions and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be followed:

- a. The Contractor will conduct a project site inspection at the start of work, and periodically thereafter, to ensure that working conditions and employee

facilities do not indicate discriminatory treatment of project site personnel.

- b. The Contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The Contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The Contractor will promptly investigate all complaints of alleged discrimination made to the Contractor in connection with its obligations under this contract, and will resolve or attempt to resolve such complaints, within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, corrective action shall include such other persons. Upon completion of each investigation, the Contractor will inform complainants of available avenues of appeal.

7. Training Special Provisions

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeypeople in the type of craft or job classification involved.

The number of training positions will be 13 , where feasible consisting of at least 4 apprentices and 9 apprentice graduates of the Pre-Apprenticeship Training Cooperative Program, sponsored by the signatories of the October 26, 1994 Memorandum of Understanding, and/or trainees.

Apprentices are defined as registered members of an approved apprenticeship program recognized by the United States Department of Labor (USDOL) Bureau of Apprenticeship and Training (BAT) or a New Jersey State apprenticeship agency recognized by USDOL BAT (e.g., New Jersey Department of Education). Graduates of the Pre-Apprenticeship Training Cooperative Program shall be classified as apprentices. Trainees are defined as skilled, semi-skilled or lower level management individuals receiving training per one of the approved NJDOT "Revised Standard Training Guidelines" (available from the Division of Civil Rights).

Where feasible, at least 50% of the training positions will be assigned to Skilled Crafts which include but are not limited to Carpenters, Dockbuilders, Electricians, Ironworkers and Operating Engineers.

a. Contractor Submission and NJDOT Approval of the Initial Training Program.

At or after the preconstruction conference and prior to the start of work, the Contractor shall submit a training program to the Resident Engineer for his or her review and comments prior to Division of Civil Rights review and approval. The Contractor's training program shall include:

- (1) the number of trainees or apprentices to be trained in all selected Training Positions,
- (2) the Standard Program Hours for all positions,
- (3) an estimate of the Minimum Available Hours actually feasible on the project toward completion of the Standard Program Hours per position,
- (4) a training schedule of Estimated Start Dates for the apprentices or trainees, developed and coordinated with the project's work progress schedule,
- (5) Training Guidelines for all positions, and
- (6) which training will be provided by the Contractor and which by Subcontractors.

The number of apprentices and trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeypeople in the various crafts within a reasonable area of recruitment. The Contractor shall submit timely, revised training programs as required throughout the project to ensure that feasible and Maximum Available Training is provided. Maximum Available Training is defined as bringing each apprentice or trainee onto the project when work first becomes available in his/her craft and providing all available training until hours are no longer available.

b. Assignment of Training to Subcontractors

In the event that portions of the contract work are subcontracted, the Contractor shall determine how many, if any, of the apprentices or trainees are to be trained by subcontractors, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by these Training Special Provisions. The Contractor shall also ensure that these Training Special Provisions are made applicable to such subcontracts.

c. Requirements for Recruitment, Selection and Approval of Apprentices and Trainees

- (1) Apprentices or trainees should be in their first year of apprenticeship or training. The Contractor shall interview and screen trainee candidates to determine if their actual work experience is equivalent to or exceeds that offered by the training program prior to submitting candidates, via the Resident Engineer, to the Division for review and approval or disapproval.
- (2) Training and upgrading of minorities (e.g., Blacks, Asians or Pacific Islanders, Native Americans or Alaskan Natives, Hispanics) and females toward journeyman status is a primary objective of these Training Special Provisions. Accordingly, the Contractor shall make every effort to enroll minorities and females, by conducting systematic and direct recruitment through public and private sources likely to yield minority and female apprentices or trainees, to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.
- (3) No employee shall be employed as an apprentice or trainee in any position in which he or she has successfully completed a training course leading to journeyman status or in which he or she has been employed as a journeyman. The Contractor shall satisfy this requirement by including appropriate questions in the employment application or by other suitable means and by submitting an accurate and complete "Apprentice/Trainee Approval Memorandum." Regardless of the methods used, the Contractor's records should document the findings in each case.
- (4) Skilled craft trainees may complete up to 3,000 total training hours on NJDOT projects, with an extension of an additional 1,000 hours permitted on a case-by-case basis. Semi-skilled and lower-level management trainees attain journeyman status upon completion of a training guideline and may complete up to three (3) different positions.

d. Apprenticeship and Training Programs

- (1) The minimum length and type of training for each position will be established in the training program selected by the Contractor and approved by NJDOT and the Federal Highway Administration. NJDOT will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average apprentice or trainee for journeyman status in the craft concerned by the end of the training period.
- (2) Apprenticeship programs registered with the US Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by USDOL BAT and training programs approved but not necessarily sponsored by the US Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training shall

also be considered acceptable provided such programs are being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the NJDOT Division of Civil Rights prior to commencing work on the positions covered by the Contractor's training program. The Division will review guidelines developed by the Contractor for approval or disapproval in accordance with the Training Guideline Approval Process described in the "Revised Standard Training Guidelines". The Division will also review existing guidelines for revision based on the same process.

- (3) It is the intention of these provisions that training be provided in construction crafts rather than clerk-typist or secretarial-type positions. Training is permitted in lower level management positions (e.g., timekeepers), where the training is oriented toward project site applications. Training in semi-skilled laborer positions is permitted provided that significant and meaningful training is available on the project site. Some offsite, classroom training (e.g., safety, first aid instruction) may be permitted as long as such training is an integral part of an approved training program and does not comprise a significant part of the overall training.

e. Reimbursement of the Contractor for Providing Training

- (1) The Contractor will be credited for each apprentice or trainee employed on the construction site who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such apprentices or trainees as provided hereinafter. Payment will be made under the pay item Trainees at the bid price in the Proposal per person-hour of training given an employee on this contract in accordance with an approved training program. If approved, payment will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other sources do not specifically prohibit the Contractor from receiving other reimbursement. Offsite, classroom training reimbursement may only be made to the Contractor when the company does one or more of the following and the apprentices or trainees are concurrently employed on a Federal-aid project: contributes to the cost of the training and/or provides instruction to apprentices or trainees or pays their wages during the offsite, classroom training (e.g., safety, first aid instruction) period.

- (2) The Contractor shall pay apprentices and trainees according to the project-specific New Jersey Department of Labor Prevailing Wage Rate Determination for the project.
- f. Documentation Required to be Signed by Apprentices or Trainees and provided to NJDOT
- (1) At the start of training, the Contractor shall provide the Resident Engineer and each apprentice or trainee with an applicable "Training Guideline" and, at the conclusion of training, an accurate and complete "Training Certificate for Reporting Hours to NJDOT", showing hours of training satisfactorily completed.
 - (2) The Contractor shall maintain and submit an accurate and complete "NJDOT Contractor's 1409 Quarterly Training Report" to the Resident Engineer within ten (10) days of the end of each training quarter (e.g., January 10, April 10, July 10, October 10); a copy shall also be given to each apprentice or trainee.
 - (3) The Contractor shall maintain and submit accurate and complete "Biweekly Training Reports" to the Resident Engineer, and each apprentice or trainee, as periodic reports documenting performance under these Training Special Provisions.
- g. Training and Promotion
- (1) The Contractor shall assist in locating, qualifying, and increasing the skills of minority and female employees, and applicants for employment.
 - (2) The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements.
 - (3) The Contractor shall periodically review the training and promotion potential of minority and female employees and encourage eligible employees to apply for such training and promotion.
- h. Determining Good Faith Compliance
- (1) Per the approved program or guideline, the Contractor shall provide Maximum Available Training to apprentices and trainees by beginning their training as soon as feasible with the start of craft work utilizing the skill involved on the project construction site and by retaining them as long as training opportunities exist in their crafts or until their training program positions are completed.
 - (2) The Contractor shall recall apprentices or trainees released due to reductions in force when the work scope permits and they are available to

return. When they are unavailable to resume training on the project site, the Contractor shall submit written proof of recall efforts and replacement candidates and/or positions in a timely manner. The Contractor shall not terminate apprentices or trainees prior to completion of their training program positions without NJDOT consultation and authorization. Apprentices or trainees are not required to be on board for the entire length of the contract.

- (3) The Contractor shall have fulfilled the contractual responsibilities under these Training Special Provisions if the company has provided Acceptable Training to the number of apprentices or trainees specified in this contract and/or by providing the remaining hours required to complete training positions begun by apprentices or trainees on other projects. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.
- (4) The Contractor shall be responsible for demonstrating all steps that have been taken in pursuance of enrolling minorities and females in the training program positions, prior to a determination as to whether the Contractor is in compliance with these Training Special Provisions.
- (5) The Contractor shall submit to the Resident Engineer written training program summaries at the 50% time and/or cost stage of the contract and also prior to project completion, describing all good faith actions and particularly addressing Maximum Available Training for incomplete training positions, per the procedure found in the revised "Instructions for Implementing the Training Special Provisions".

i. Enforcement Measures and Contractor's Rating

- (1) Payment will not be made if either the failure to provide the required training or the failure to hire the apprentice or trainee as a journeyman is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of these Training Special Provisions.
- (2) Per established procedures and scheduled Contract Compliance Reviews, the Contractor's performance will be rated and reviewed periodically by the Department.
- (3) Noncompliance with these Training Special Provisions may be cause for delaying or withholding monthly and final payments, pending corrective and appropriate measures by the Contractor to the satisfaction of the Department, per Item 1d of these EEO Special Provisions.

8. Unions

If the Contractor relies in whole or in part upon unions as a source of employees, the
EEO SPECIAL PROVISIONS

Contractor will make maximum effort to obtain the cooperation of such unions to increase opportunities for minorities and females within the unions, and to effect such union referrals to the construction project. Actions by the Contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The Contractor will use maximum effort to develop, in cooperation with the unions, joint training programs aimed at qualifying more minorities and females for union membership and increasing their skills in order to qualify for higher paying employment.
- b. The Contractor will use maximum effort to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.
- c. The Contractor will obtain information concerning the referral practices and policies of the labor unions except that to the extent such information is within the exclusive possession of the labor unions and they refuse to furnish this information to the Contractor, the Contractor shall so certify to the Department and shall set forth what efforts have been made to obtain this information.
- d. In the event the unions are unable to provide the Contractor with a reasonable flow of minority and female referrals within the time limit set forth in the collective bargaining agreement, the Contractor will through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified and/or qualifiable minorities and females. (The US Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the Department.

9. Subcontracting

- a. The Contractor will use maximum effort to solicit bids from and to utilize minority subcontractors or subcontractors with meaningful minority and female representation among their employees. Contractors may use lists of minority-owned construction firms as issued by the Department.
- b. The Contractor will use maximum effort to ensure subcontractor compliance with the equal employment opportunity obligations.

10. Documents and Reports

- a. The Contractor will maintain such documents as are necessary to determine

compliance with the contract's equal employment opportunity requirements. Documents will include the following:

- (1) the number of minorities, non-minorities, and females employed in each work classification on the Project.
 - (2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and females (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).
 - (3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
 - (4) the progress and efforts being made in securing the services of minority and female subcontractors or subcontractors with meaningful minority and female representation among their employees.
- b. All such documents must be retained for a period of 3 years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department and the Federal Highway Administration.
- c. The Contractor and each subcontractor will complete and submit monthly, except July, to the Department Form T-AD-1276 Monthly Project Manning Report. The FHWA-1391 July report is of special interest to the Department and FHWA; therefore it must be submitted to the Resident Engineer not later than 5 calendar days following the end of July. Payments due the Contractor will be reduced by \$100 per day for each day after August 5 that the 1391 Form has not been submitted.

SPECIAL CONTRACT PROVISIONS FOR INVESTIGATING, REPORTING
AND RESOLVING EMPLOYMENT DISCRIMINATION AND SEXUAL
HARASSMENT COMPLAINTS

The contractor hereby agrees to the following requirements in order to implement fully the nondiscrimination provisions of the Supplemental Specifications.

The Contractor agrees that in instances when it receives from any person working on the project site a verbal or written complaint of employment discrimination, prohibited under N.J.S.A. 10:5-1 et seq., 10:2-1 et seq., 42 U.S.C. 2000(d) et seq., 42 U.S.C. 2000 (e) et seq. and Executive Order 11246, it shall take the following actions:

1. Within one (1) working day commence an investigation of the complaint which shall include but not be limited to interviewing the complainant, the respondent, and all possible witnesses to the alleged act or acts of discrimination or sexual harassment.
2. Prepare and keep for its use and file a detailed written investigative report which includes the following information:
 - a) Investigatory activities and findings.
 - b) Dates and parties involved and activities involved in resolving the complaint.
 - c) Resolution and corrective action taken if discrimination or sexual harassment is found to have taken place.
 - d) A signed copy of resolution of complaint by complainant and contractor.

In addition to keeping in its files the above-noted detailed written investigative report, the contractor shall keep for possible future review by the Department all other records, including but not limited to, interview memos and statements.

3. Upon the request of the Department, provides to the Department within ten (10) calendar days a copy of its detailed written investigative report and all other records on the complaint investigation and resolution.
4. Take appropriate disciplinary action against any contractor employee, official or agent who has committed acts of discrimination or sexual harassment against any contractor employee or person working on the project. If the person committing the discrimination is a subcontractor employee, then the contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with project's contract requirements.
5. Take appropriate disciplinary action against any contractor employee, official or agent who

retaliates, coerces or intimidates any complaint and/or person who provides information or assistance to any investigation of complaints of discrimination or sexual harassment. If the person retaliating, coercing or intimidating a complainant or other person assisting an investigation is a subcontractor's employee, then the contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with the project's contract requirements.

6. Ensure to the maximum extent possible that the privacy interests of all person who give confidential information in aid of the contractor's employment discrimination investigation are protected.

In conjunction with the above requirements, the contractor shall develop and post a written sexual harassment policy for its work force.

Failure by the contractor to comply with the above requirements may be cause for the New Jersey Department of Transportation to institute against the contractor any and all enforcement proceedings and/or sanctions authorized by the contract or by state and/or federal law.