State of New Jersey
Department of Transportation

Supplementary Specifications
For
Federal Aid Projects

James E. McGreevey
Governor

James P. Fox
Commissioner

Edition 2002

SUPPLEMENTARY SPECIFICATIONS FOR FEDERAL AID PROJECTS

FOR THE _____ OF

_____

IN THE _____ OF _____

COUNTY OF _____

AUTHORIZATION OF CONTRACT

The contract for this project is authorized by the provisions of local public contracts law, NJSA 40A: 11-1 et seq.

SPECIFICATIONS TO BE USED

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

These supplementary specifications also include the following:

Required contract provisions, Federal-Aid construction contracts (form FHWA-1273), pages 1 to 10 inclusive, revised April 1993.

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

Notice of Requirements 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.

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.

Incentive Program, Disadvantaged Business Enterprise Utilization Attachment for FHWA Funded Contracts, pages 1 and 2, dated April 6, 1993.

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

Disadvantaged Business Enterprise Utilization Attachment, FHWA Funded Contracts, pages 1 to 7 inclusive, dated September 1987, revised January 1989, September 1992 and May 1995.

WAGE RATES

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, Volume 1, General Wage Decision No. _____, Modification No. _____, dated _____.

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). 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 contracting agency 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 his sureties shall be liable to the contracting agency for any excess costs occasioned thereby.

GENERAL

All awards shall be made subject to the approval of the New Jersey Department of Transportation. No construction shall start before approval of said award by the New Jersey Department of Transportation. Prior to the start of construction the contractor must submit a Material Questionnaire (SA-11) listing all sources of materials. Any materials used on the project from a non-approved New Jersey Department of Transportation source will be considered non-participating. The contractor is also notified that the District Office, Division of Local Aid and Economic Development must be notified of the construction commencement date at least five (5) calendar days prior to the start of construction.

Award of contract and subletting will not be permitted to, materials will not be permitted from, and use of equipment will not be permitted that is owned and/or operated by, firms and individuals included in the report of suspensions, debarments and disqualifications of firms and individuals as maintained by the Department of the Treasury, General Services Administration, CN-039, Trenton NJ 08625 (609-633-3990).

Payment for a pay item in the proposal includes all the compensation that will be made for the work of that item as described in the contract documents unless the "basis of payment" clause provides that certain work essential to that item will be paid for under another pay item.

Whenever any section, subsection, subpart or subheading is amended by such terms as changed to, deleted or added it is construed to mean that it amends that section, subsection, subpart or subheading of the 2001 Standard Specifications unless otherwise noted.

Whenever reference to page number is made, it is construed to refer to the 2001 Standard Specifications unless otherwise noted.

Henceforth in this supplementary specification whenever reference to the State, Commissioner, Department, Engineer or Inspector is made, it is construed to mean the particular municipality or county executing this contract.

Whenever reference to Title 27 is made, it is construed to mean Title 40.

DIVISION 100 - GENERAL PROVISIONS

SECTION 101 - GENERAL INFORMATION

101.03 Terms.

THE FOLLOWING IS ADDED:

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

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 TERM "SUBSTANTIAL COMPLETION" IS CHANGED TO:

SUBSTANTIAL COMPLETION. The term "Substantial Completion" means the point at which the performance of all Work on the Project has been completed except 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 repairs, and cleanup is less than two percent of the Total Adjusted Contract Price.

THE TERM "EXTREME WEATHER CONDITIONS" IS CHANGED TO:

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.

101.04 Inquiries Regarding the Project.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Inquiries regarding the various types of work of this Contract shall be directed to the following representatives of the Department:

1. Before Award of the Contract.

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.

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

102.06 Examination of Contract Documents and Site of Project.

6. Existing Structures.

THE FIRST SENTENCE IS CHANGED TO:

A list of existing structures within the Project is provided on the Plans.

SECTION 104 - SCOPE OF WORK

104.05 Increased or Decreased Quantities.
THE FOLLOWING IS ADDED TO THIS SUBSECTION:

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

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

105.09 Cooperation with Utilities.
THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

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:

Bidders are advised to verify the above information as to 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 the Standard Specification's, as noted in the first paragraph of Subsection 105.09, to verify that a conflict does not exist.

3. Railroad Traffic and Property.
THE FOLLOWING IS ADDED:

Location	Speed	Number Per Day	Time

105.22 Substantial Completion.
THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

If the Engineer determines that the Work is substantially complete, the Engineer will then prepare a letter which states the date of Substantial Completion and establishes a reasonable time within which the Contractor shall perform the final cleanup, and repair unacceptable Work, which time may be prior to Contract Time as modified.

SECTION 106 – CONTROL OF MATERIAL

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.

THE LAST SEVEN PARAGRAPHS ARE CHANGED TO:

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

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

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

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

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

Payment will be made under:

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

Payment for telephone service will be made according to Subsection 108.15.

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107.22 Risks Assumed by the Contractor

SUBPART 1 IS CHANGED TO:

1. **Risks of Loss or Damage to the Permanent Construction**. Until Acceptance, and within the limits of the Project's work, the Contractor shall bear the risk of all loss or damage to all permanent construction and temporary construction performed under this Contract and to materials, whether or not it has received payment for such construction or materials under Subsection 109.05, 109.06, or 109.07, except payment will be made to the Contractor for the repair or replacement of any permanent element of the construction which has not been accepted by the Department, if the element of the work damaged is completed to the stage of serving its intended function and is subsequently damaged by accident by public traffic. In order to receive payment, the Contractor must supply satisfactory evidence that such damage was caused by a public traffic accident which was not caused by vandalism or by the equipment of the Contractor or any of its subcontractors or suppliers. Satisfactory evidence shall generally be limited to: accident reports filed with the Division of Motor Vehicles, police agencies or insurance companies; statements by reliable, unbiased eye witnesses; identification of the vehicle involved in the accident. Physical evidence that the damage was

caused by a motor vehicle (such as tire marks or broken headlight glass) will not be sufficient unless it can be clearly shown that the damage was not caused by the Contractor's vehicles or by vandalism. The Contractor shall take every precaution, as allowed by the Contract against injury or damage to any part of the construction or to materials by the action of the elements, the traveling public, vandalism, or from any other cause, whether arising from the execution or the non-execution of the work. The Contractor shall promptly repair, replace, and make good any such damage or loss without cost to the Department. The Contractor shall not bear such risk of loss or damage, which arises from acts of war or floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon unless such loss or damage is covered by insurance.

107.23 Insurance.

6. Railroad Insurance.

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

National Railroad Passenger Corporation (AMTRAK)
Consolidated Rail Corporation (CONRAIL)
New Jersey Transit Rail Operations
New York Susquehanna & Western Railway Corporation (NYS&W)

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

SECTION 108 - PROSECUTION AND PROGRESS

108.02 Subcontracting.

There are no Specialty Items in this Project.
Specialty Items are as listed below:

Drilling and blasting.
Above ground highway lighting items.
Above ground sign lighting items.
Above and below bridge deck lighting items.
Electrical wire items.

108.05 Mobilization.

THIS SUBSECTION IS CHANGED TO:

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

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

Payment will be made in accordance with the following schedule:

1. When five percent of the Work is completed and the Baseline Progress Schedule is approved by the Engineer, 25 percent of the lump sum bid for mobilization or 2.5 percent of the Total Contract Price, whichever is less, will be paid.
2. When ten percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 50 percent of the lump sum bid for mobilization or five percent of the Total Contract Price, whichever is less, will be paid.
3. When 15 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 75 percent of the lump sum bid for mobilization or 7.5 percent of the Total Contract Price, whichever is less, will be paid.

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

Payment will be made under:

Pay Item	*Pay Unit*
MOBILIZATION	LUMP SUM

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

108.10 Time of Completion.

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

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

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

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

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

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

108.11 Extensions and Reductions of Contract Time.

THIS SUBSECTION IS CHANGED TO:

A. Basis for Extension. Where appropriate under the provisions of this Subsection, 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 current controlling operations and the overall Completion. Increases or decreases in Work or such delays, which do not affect the overall Completion, are not to be the basis for reduction or extension of Contract Time. Extensions of Contract Time will not be granted under this Subsection where it is determined that the Contractor could have avoided the circumstances which caused the request for extension.

If the Contractor is delayed in completion of the Work by reason of changes made under Subsection 104.02, or by failure of the Department to acquire right-of-way, or by any act of other contractors consistent with Subsection 105.10, or due to the discovery of archeological finds consistent with Subsection 108.13, or the discovery of hazardous substances, or by any act of the Engineer or of the Department not contemplated by the Contract, an extension of Contract Time commensurate with the delay in overall completion of the Contract thus caused will be granted, and the Contractor is relieved from any claim for liquidated damages or engineering and inspection charges.

Additionally, the Contractor may be granted an extension of Contract Time and not be assessed liquidated damages or the costs of engineering and inspection for any portion of the delay in overall completion of the Work beyond the time provided in Subsection 108.10 caused by the following reasons:

1. acts of civil or military authorities, war, or riot;
2. fire;

3. floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon (except on working day contracts);
4. extreme weather conditions (see Item 1 of the fourth paragraph) (except on working day contracts);
5. epidemics or quarantine restrictions;
6. strikes or labor disputes beyond the control of the Contractor which prevent work on the construction operations which are critical to the completion of the Project;
7. shortages of materials (see Item 2 of the fourth paragraph) or freight embargoes;
8. acts of the State in its sovereign capacity;
9. failure of the Engineer to furnish interpretations of the Contract Documents (see Item 3 of the fourth paragraph).

B. Criteria for Evaluation. Extension of Contract Time for the reasons set forth in this Subsection will not be granted unless the Contractor has notified the 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 Engineer will evaluate the facts and the extent of the delay, and the Engineer's findings will be final and conclusive and will be based on the following:

1. Extensions of Contract Time for extreme weather conditions will be granted in accordance with the following:

Number of Days the Contractor's Work is Limited to in One Month as the Result of Extreme Weather Conditions (April through November inclusive)	Extension of Contract Time Allowable
16 - 31	0
15	1
14	2
13	3
12	4
11	5
10	6
9	7
8	8
7	9
6	10
5	11
4	12
3	13
2	14
1	15
0	16

Extensions of Contract Time for extreme weather conditions will be granted in accordance with the following for the months of December through March inclusive:

It is anticipated that the average number of total Working Days during this four month winter period is for road work (Exclusive of temperature sensitive work, for example but not limited to, paving operations, earthwork, aggregates, curb and sidewalk, etc.) and for bridge work (Exclusive of temperature sensitive work, for example but not limited to, concrete decks, parapets, bridge repairs, bridge painting, etc.)

In using the above, the Engineer will:

a. Consider days for which an extension is granted under the above category "floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon" as days on which the Contractor's work is limited as the result of these extreme weather conditions;

b. Consider days for which an extension is granted under the above categories for causes other than "floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon" as days on which the Contractor worked and was unaffected by extreme weather conditions; and

c. Make the above calculation based on the full number of days in the calendar month as being days on which the Contractor could have worked without regard to Saturdays, Sundays, and holidays.

d. Extension of time for extreme weather conditions will only be granted when the Critical Path of the Progress Schedule is affected and documented by the contractor in accordance with Subsection108.04. No extension of time will be granted unless the Contractor submits daily documentation of such extreme weather.

2. Extensions of Contract Time will not be granted for a delay caused by a shortage of materials unless the Contractor furnishes:

   a. Documentary proof that it has diligently made every effort to obtain such materials from all known sources within reasonable distance from the Work, and

   b. Further proof in the form of a progress schedule, as required in Subsection 108.04, showing that the inability to obtain such materials when originally planned, did, in fact, delayed the date of Completion which 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 until 20 State Business Days after receipt of such demand in writing as required by Subsections 105.01 and 105.07, and not then unless such request for an interpretation of the Contract Documents is reasonable and made in good faith, and the failure to respond was unwarranted.

4. It is understood and agreed that the Contractor has considered in its bid all of the permanent and temporary utility facilities in their present or relocated positions as may be shown on Plans, as described in Specifications and as revealed by its site investigation; is aware that utility company service demands, adverse field conditions and emergencies may affect the owner's ability to comply with the proposed schedules for utility work; and is cognizant of the limited ability of the State to control the actions of the utility companies, including the actions of railroads, and has made allowances in its bid. Extensions of Contract Time will be granted for extreme weather and exigent circumstances only, as specifically set forth above and which are outside the control of the respective utility company(ies) or the Contractor as determined by the Engineer utilizing the Extreme Weather provisions specified in 1. above. Extension of time for utility work will only be granted when the Critical Path of the Progress Schedule is affected and documented by the Contractor in accordance with Subsection108.04.

Except where specifically provided in the Contract Documents, the Contractor shall not make any claim for damages or additional compensation for any delay in or hindrance to the performance of the Contract occasioned by any act or omission to act by the State or any of its representatives, or for any of the reasons enumerated in this Subsection and agrees that any such claim shall be fully compensated for by an extension of Contract Time to complete performance of the Work.

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, men, 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, as a result of modifications made under Subsection 104.02, 104.05, 104.06, or 108.09, the Work required is reduced or altered so that the time required for Completion is reduced, the Engineer may reduce the Contract Time provided under Subsection 108.10. The Engineer will evaluate the facts and the extent of the reduction. The Engineer's findings thereon will be final and conclusive.

It is the intention of the above provisions that the Contractor or surety is not relieved of liability for liquidated damages or engineering and inspection charges for any period of delay in Completion in excess of that expressly provided for in this Subsection.

108.12 Right-Of-Way Delays.
THE TITLE OF THIS SUBSECTION IS CHANGED TO:

108.12 Right-Of-Way Information and Delays.

108.12 Right-Of-Way Information and Delays.
THE FOLLOWING IS ADDED:

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

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

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

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

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

Properties and Vacation/Availability Dates

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

108.16 Failure to Complete on Time.
LIQUIDATED DAMAGES SHALL BE AS FOLLOWS:

1. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item A of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Contractor shall pay liquidated damages consisting of Road User Costs and Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of $_____.
2. For each Calendar Day that the Contractor fails to complete the entire Work of the Project as specified in Item B of Subsection 108.10 of these Special Provisions, for Completion, the Contractor shall pay liquidated damages consisting of Construction Engineering Costs, as defined in Subsection 101.03, to the State in the

amount of $_____, provided that Construction Operations as specified for Substantial Completion are actually completed.

1. For each Working Day that the Contractor fails to complete Construction Operations, as specified in Item A of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Contractor shall pay liquidated damages consisting of Road User Costs and Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of $_____.
2. For each Working Day that the Contractor fails to complete the entire Work of the Project as specified in Item B of Subsection 108.10 of these Special Provisions, for Completion, the Contractor shall pay liquidated damages consisting of Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of $_____, provided that Construction Operations as specified for Substantial Completion are actually completed.

The days in default set forth above are the number of Calendar Days in default when the time for Completion is specified on the basis of Calendar Days or a specified completion date, and are the number of Working Days in default when the time for Completion is specified on the basis of Working Days.

Anytime after the Engineer notifies the Contractor in writing, that Substantial Completion of the Project has been actually achieved, the Commissioner may elect, to waive the imposition of liquidated damages under paragraph number 2 above and, in lieu thereof, require the Contractor to pay the actual costs incurred by the State for engineering, inspection, and administration (including overhead) between the actual date of Substantial Completion or such subsequent date as the Commissioner may determine and the actual date of Completion of all Work, as established by the Certificate of Completion. The Contractor hereby waives the right to challenge this election by the Commissioner on the grounds that such costs exceed the amount of liquidated damages specified under number 2 above.

The Commissioner will recover all 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.

108.19 Lane Occupancy Charges.

THE FOLLOWING IS ADDED:

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

Description	Rate per Minute per Lane

SECTION 109 – MEASUREMENT AND PAYMENT

109.03 FORCE ACCOUNT PAYMENT.

5. Profit. Profit shall be computed at ten percent of the following:

SUBPART C. IS ADDED AS FOLLOWS:

c.Total fringe benefits on total direct labor cost as computed above.

6. Overhead.

THE FIRST SENTENCE IS CHANGED TO:

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

THE FIRST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

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

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

DIVISION 200 - EARTHWORK

SECTION 201 - CLEARING SITE

201.04 Removal of Bridges, Culverts, and Other Structures.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

The bridge work to be performed under this Contract includes removal and disposal of reinforced concrete bridge decks, sidewalks, curbs, parapets, deck joints, railings, and conduit as shown on the Plans and as directed by the Engineer.

The equipment listed below is permitted subject to the following applicable restrictions:

1. Pneumatic or Electric Equivalent Hand Operated Hammers.

a. Up to 90-pound hammers exclusive of the bit may be used for deck removal not closer than 6 inches to structural members. This hammer may also be used for removal of barriers, sidewalks, curbs, and parapets not closer than 6 inches from structural members. Only chisel point bits will be permitted. Structural members are defined as girders, floorbeams, stringers, diaphragms, or cross frames.

b. Up to 30-pound hammers exclusive of bit may be used for removal of concrete within 6 inches of structural members.

2. Saw Cutters.

a. Vermeer concrete cutters or cutting saws may be used to cut within 6 inches adjacent to structural members.

b. If water is used in conjunction with cutting operations, shielding beneath the operation shall prevent water leakage. Water shall be disposed by an approved method. The disposal method shall be submitted by the Contractor for approval by the Engineer.

3. Hydraulic Breakers. Hydraulic breakers, such as, but not limited to, Tramac or other ram-hoe type breakers, are permitted for removal of substructure concrete. For deck concrete removal, such equipment is permitted subject to the following restrictions:

a. The girders shall be analyzed to determine if induced stresses may be harmful.

b. The centerline and limits of the top flange of girders shall be delineated before starting the equipment operation.

c. The equipment shall not be used directly over the top of girders nor in overhang areas. Concrete removal in these areas shall be performed by jackhammers.

d. Pulling and twisting of the reinforcement steel is prohibited.

e. Any damage to existing reinforcement, shear studs, structural steel, or any other structural components that are to remain shall be repaired at no cost to the State.

4. Hydraulic Splitters. Hydraulic splitters such as Darda hydraulic splitters are permitted subject to approval.

5. Other Equipment. Equipment not specifically approved in this Section may be used only with written approval.

The sequence of removal shall be coordinated with the operations of the utility company to protect and maintain its facilities.

During removal operations, the Contractor shall take all necessary precautions so as not to damage the structural members scheduled to remain. All damage done to the existing structural members scheduled to remain shall be repaired. The repair procedure shall be as follows:

1. Prestressed Concrete Stringers and Concrete Diaphragms. Damage done to existing prestressed concrete stringers and concrete diaphragms scheduled to remain shall be repaired with nonshrink grout conforming to Subsection 914.03 before deck placement. The repair procedure shall be approved.

2. Steel Stringers, Floorbeams, Cross Frames, and Diaphragms.

a. Repair procedures to tensile components shall conform to ASTM A 6/A 6M and the following:

(1) Gouges up to 120 mils shall be removed by grinding flush in the direction of principal stress.

(2) Gouges deeper than 120 mils shall be removed first by grinding; then, weld metal shall be deposited and ground flush with the surface of the metal in the direction of principal stress.

Welding shall be done using low hydrogen electrodes conforming to current AWS Specifications A5.1 and A5.5. The electrodes shall be protected from moisture during storage.

(3) Kinks and deformations shall be repaired by flame straightening or a combination of flame straightening and jacking. Flame straightening shall be done by personnel approved by the Department with a minimum of three years of prior documented experience.

b. Repair procedures to compression components shall conform to the following:

(1) Where more than five percent of the cross-sectional area of the member is damaged due to removal operations, the Contractor shall submit a repair procedure for approval.

(2) Kinks and deformations shall be repaired as outlined in 2.a (3) above.

Existing top flanges of beams exposed by removal operations shall be cleaned and painted with a prime coat of paint according to Subsection 514.07, Subpart B.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Special protective systems for the removal of bridges, culverts, and other structures shall be as follows:

1. Temporary Shielding. Temporary shielding for demolition and new construction shall include furnishing, installing, and removing a structural framing and barrier system. The system shall be supported from girders to provide an adequate and substantial temporary shielding system to protect vehicular, pedestrian, and railroad traffic from falling construction materials or other objects. The barrier system shall remain in place during the time that construction work is performed and until the work is completed and accepted.

For deck replacement or new deck work, the temporary shielding shall seal the underside of deck and extend outside of the fascia stringers to enclose the soffits and parapets.

For parapet removal and replacement or new parapet construction, an outrigging type of temporary shielding, which encloses the soffit and parapet, shall be used.

The Contractor shall submit for approval detailed working drawings showing all elements of the temporary shielding system, including bonding and grounding over electrified rail lines, design calculations, and the sequence of operations thereof, signed and sealed by a Professional Engineer licensed in the State. Should the Contractor's operation or construction staging require it to install and remove the shielding more than once, no additional payment will be made.

The traffic lanes and pedestrian areas below the areas where temporary shielding is being installed shall be closed, in accordance with the requirements of Section 617.

The temporary shielding shall be designed to withstand a load of at least 0.8 psi or greater if heavier loads are anticipated and shall prevent small particles and dust from falling through.

Bolted connections or welding between temporary shielding and bottom flanges of the beams shall not be permitted. Any materials dropped on the temporary shielding shall not be allowed to accumulate and shall be removed promptly.

The selection of sizes, materials, their arrangements, and details shall be the Contractor's option and responsibility, but subject to approval by the Engineer.

In no case shall the temporary shielding reduce the existing underclearances of the bridges to less than 14 feet – 9 inches over roadways and 22 feet over railroads. If any existing underclearance is less than these values, it shall be maintained without any further reduction.

The Contractor shall obtain the Engineer's approval of the method, design, and details of the temporary shielding system that the Contractor intends to use for the protection of traffic. No construction work shall be performed above traffic before such approval.

It is the Contractor's responsibility to ensure the structural integrity and continuous operation of the railroad's electrified lines, their supports, and appurtenances.

The Contractor shall comply with the railroad's maintenance of traffic requirements, rules, and regulations.

A 6-inch minimum clearance to a catenary wire shall be maintained. An electrification shutdown by the railroad on a track-by-track basis shall allow for construction of the special protection systems.

2. Bonding and Grounding. Bonding and grounding shall consist of the furnishing of cables, connectors, terminals, and all hardware required for grounding and bonding the solid overhead barrier to the main girders. All installation of grounding materials will be done by the railroad forces at no cost to the Contractor.

The work shall also include furnishing cable and hardware for the grounding and bonding of the temporary protective barrier.

The Contractor shall submit a list for review by the Engineer identifying the items being furnished with a complete description of the items including manufacturer and catalog number. The list shall be submitted to the railroad for approval before ordering the materials.

The following materials are required under this item:

List of Materials

Item	Description	Quantity Required
1.	U-bolt, -inch diameter by 4-inch, BS fastener	--------
2.	Strap, clevis, 1¼ by 2 inches stock, 12-inch connecting length, 1-inch diameter hole, -inch diameter bolt, ultimate strength 25 psi, Brewer Tilchener Corp.-3074 C	--------
3.	Dead end eye bolt, compression type steel, use DIE 6010SH, compression tool, 60A ALCOA 9190-332	--------
4.	Jumper cable, compression type aluminum, use DIE 6020AH, compression tool 60A ALCOA 5120-781	--------
5.	Terminal - Bundy AK2C39B1 to 336400 Cable (1)	--------
6.	Ground terminal - Bundy AK2C39B1 to 336400 Cable (2)	--------
7.	Terminal - solid barrier to 0.17 square inch cable Bundy KC28B1	--------
8.	Compound, aluminum to copper connection (ALNOX) CANS	--------
9.	Termination, dead end strand clamp, ALCO 336 4 KCM	--------
10.	Clip, bronze, complete type BC, Ohio brass	--------
11.	Thimble-Bronx 336 4 KCM	--------
12.	U-bolt, 1¼-inch diameter by 1½inchloop 336 4 KCM 11, 30/7 STR ACSR, ANACONDA insulated aluminum cable having a diameter of 0.17 square inches, ANACONDA	--------

The solid overhead barrier shall be grounded to the main girders at two locations on each side of the bridge with 336400 bare aluminum cable. Terminals, connectors, and hardware shall be compatible for cable to steel connections.

The top rail of the solid overhead barrier shall be bonded at all splices with insulated aluminum cable having a diameter of 0.17 square inches, seven-strand polyethylene weatherproof insulation. Terminals and hardware shall be compatible for the cable to steel connections.

The temporary protective shield shall be bonded with copper cable having a diameter of 0.17 square inches. Terminals and hardware shall be compatible for the cable and connected material. One cable having a diameter of 0.17 square inches shall be placed on top of the shield and run the full length of the shield. The barrier shall be grounded to the girders at each end.

The Contractor shall remove concrete from existing fascia girders and drill holes for the necessary connection to the grounding system as shown on the Plans.

201.07 Removal of Underground Storage Tanks.

The locations and types of underground storage tanks to be removed are as follows:

Parcel No.	Tank Size	Contents	Tank Registration No.

201.09 Demolition of Buildings.

5. Backfilling.

THE FIRST ITEM OF THE FIRST PARAGRAPH IS DELETED.

201.12 Basis of Payment.

THE SECOND PARAGRAPH IS CHANGED TO:

Payment for the Pay Item "Clearing Site" in excess of $_____ will not be made until Completion.
THE FOLLOWING IS ADDED AFTER THE THIRD PARAGRAPH:

Payment for the Pay Item "Clearing Site, Bridge (___)" in excess of $_____ will not be made until Substantial Completion.

Payment for the Pay Item "Clearing Site, Structure (___)" in excess of $_____ will not be made until Substantial Completion.

SECTION 202 - ROADWAY EXCAVATION

202.02 Classification.

D. Roadway Excavation, Regulated Waste. Based on the preliminary analysis the classification of regulated waste is _____.

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 ___ hours, unless approved by the Engineer.

SECTION 203 - EMBANKMENT

203.13 Vertical Drain Method.

3. Construction of Zone 3 Embankment.

SUBPART C. IS CHANGED TO:

c. Zone 3 material shall be placed as follows:

4. Installation of Vertical Wick Drains. Vertical wick drain installation requirements are as follows:

SECTION 207 – SUBSURFACE STRUCTURE EXCAVATION

207.03 Bedding Materials.

SUBSECTION HEADING IS CHANGED TO:

207.03 Bedding and Backfill Materials.

THE FOLLOWING IS ADDED:

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

207.06 Backfilling.

A. Pipes and Culverts.

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

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.

DIVISION 300 - BASE COURSES

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

301.05 Compaction.

3. Waiving Standard Compaction Requirements.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The compaction requirements in Subheadings 1 and 2 are waived.

301.08 Maintenance Under Traffic.

THIS SUBSECTION IS CHANGED TO:

When it is provided on the Plans that traffic is permitted to ride on the completed base course, the base course shall be maintained smooth and uniform until covered by the following stage of construction.

DIVISION 400 - SURFACE COURSES

SECTION 404 – HOT MIX ASPHALT (HMA)

404.05 Plant Laboratory.

ITEM 23. OF THE FOURTH PARAGRAPH IS CHANGED TO:

23. Microcomputer and work station requirements shall be in accordance to the following:

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 1.5 GHz or faster, Intel processor with MMX technology, with 512 MB RAM, 32 MB Video RAM, mouse, mouse pad, 60 GB hard drive, one 52X DVD-ROM Drive, one CD-R Recordable Drive, and one 3½inch, 1.44 MB floppy diskette drive installed as the "A" drive.

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 dedicated telephone line to be used in conjunction with the microcomputer modem.

d) 19 inch (483 millimeter) or larger Super VGA color monitor having a dot pitch of 0.28 or better, with anti-glare screen, and tilt/swivel capabilities.

e) 250 Megabyte Zip Drive internal or external with backup software for MS-Windows and DOS, and thirty 250 Megabyte formatted data cartridges corresponding to the tape drive size (e.g., Iomega Zip Drive or equivalent).

f) Uninterruptible power supply (UPS) - OMNI 1000 or approved equal (e.g., APC-1000 - American Power Corporation).

g) 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).

h) Static mat, floor type, 4 by 5 feet or larger with grounding capabilities.

i) Computer workstation, printer stand, and/or table having both appropriate surface and chair height.

j) Five boxes of 3½inch floppy diskettes that match the drive density of the 1.44 MB floppy diskette drive (ten per box).

k) 150 CD-R 700 MB (or larger) recordable CD's compatible to the CD drive.

l) One floppy diskette holder (holds 50, 3½inch floppy diskettes), and dust covers for the microcomputer, monitor, keyboard, and printer.

m) Two head cleaner kit for 3½inch floppy diskette drive.

404.21 Surface Course Rideability Requirements.

For this Project, the payment reduction provisions for new construction, reconstruction, or dualization projects shall govern at the following locations:

For this Project, the payment reduction provisions for resurfacing or widening projects shall govern at the following locations:

For this Project, the no payment reduction provisions shall govern.

404.25 Method of Measurement.

THE SIXTH FULL PARAGRAPH FROM THE LAST IS CHANGED TO:

The basic asphalt price index will be the monthly asphalt price index published during the month of Advertisement.

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.

404.26 Basis of Payment.

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

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

THE FOLLOWING PAY ITEM IS DELETED:

SEALING OF CRACKS AND JOINTS IN HOT MIX ASPHALT SURFACE COURSE

SECTION 406 – SUPERPAVE HOT MIX ASPHALT COURSES

406.13 Surface Course Rideability Requirements.

For this Project, the payment reduction provisions for new construction, reconstruction, or dualization projects shall govern at the following locations:

For this Project, the payment reduction provisions for resurfacing or widening projects shall govern at the following locations:

For this Project, the no payment reduction provisions shall govern.

DIVISION 500 - BRIDGES AND STRUCTURES

SECTION 501 - CONCRETE STRUCTURES

501.02 Materials.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The epoxy resin system that is to be used for the filling of concrete cracks by pressure injection shall be a two component 100 percent solid moisture insensitive high-modulus high-strength epoxy resin adhesive. The following products, or approved equal, may be used:

1. Sikadur Hi-Mod LV, manufactured by Sika Corporation.
2. Duralcrete, as manufactured by Dural International Corporation.
3. Metaband HMLV, as manufactured by American Metaseal Company.
4. Thermal-Chem Injection Resin Product No. 2, as manufactured by Thermal-Chem, Inc.
5. Concressive 1380, as manufactured by Adhesive Engineering Co. of San Carlos, California.

501.07 Forms.

7. Permanent Steel Bridge Deck Forms.

THE FIRST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

The use of permanent steel bridge deck forms shall conform to the following:

SECTION 503 - STEEL STRUCTURES

503.18 Basis of Payment.

THE SECOND PARAGRAPH IS CHANGED TO:

Structural bearing assemblies shall include payment for furnishing all labor, materials, tools, equipment and incidentals, and all work involving furnishing, testing, and installing said bearing assemblies, complete and in place, as shown on the Working Drawings.

SECTION 504 - TIMBER STRUCTURES

504.03 Construction Requirements.

THE FOURTH PARAGRAPH IS DELETED.

SECTION 505 - LOAD BEARING PILES

505.03 Equipment.

F. Water Jets.

THE FOLLOWING IS ADDED:

505.06 Methods of Driving.

THE FIRST PARAGRAPH OF SUBPART 4. IS CHANGED TO:

4. Test Piles. Test piles of the specified materials, dimensions, and at the designated locations shall be furnished and driven with an impact hammer unless specifically stated otherwise in the Special Provisions or on the Plans. In general, lengths of test piles will be greater than the estimated length of production piles to provide for variation in soil conditions. The driving equipment and procedure (criteria) used for driving test piles shall be identical to that which the Contractor proposes to use on the production piles. The Contractor

shall excavate the ground at each footing location to the elevation of the bottom of the footing before the pile is driven.

505.07 Determination of Bearing Values.

THE FIRST PARAGRAPH IS CHANGED TO:

Test piles of the materials and dimensions specified and lengths directed shall be furnished. Test piles shall be driven with the same type of equipment that is used for driving production piles. Test piles shall be driven at the designated locations to the bearing capacity and tip elevation that is shown on the Plans. The Engineer shall be the sole judge in determining bearing capacity and the length of pile to be driven.

1. Static Pile Load Test.

THE FOLLOWING IS ADDED:

SUBPART 2. IS CHANGED TO:

2. Empirical Pile Formula. If no other methods of determining pile capacity are stated in the Special Provisions or Plans, then the ENR formula shall be used.

SECTION 507 - PNEUMATICALLY APPLIED MORTAR

507.04 Applying Mortar.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Anchors for attaching steel reinforcement shall be power driven fasteners as manufactured by one of the following suppliers:

Hilti, Inc.
Tulsa, Oklahoma

Ramset Fastening Systems
Route 139
Bradford, Connecticut

Remington
25000 S. Western Avenue
Park Forest, Illinois

SECTION 510 - PUBLIC UTILITIES IN STRUCTURES

510.02 Materials.

1. Gas Mains.

2. Water Mains.

510.03 Construction Requirements.

B. Gas Mains.

C. Water Mains.

SECTION 514 - PAINTING EXISTING BRIDGES

514.05 Cleaning Methods.

SUBPART B. IS CHANGED TO:

B. Epoxy Mastic Coating System. All existing surfaces shall be hand/power tool cleaned according to Subpart A.1 above, except where commercial blast cleaning is indicated on the Plans. All commercial blast cleaned surfaces shall leave an anchor profile from 1.5 to 3.0 mils deep.

514.13 Protection of Environment, Structure, Persons, and Property.

1. Blast Cleaning Requirements.

a. Pollution Control System.

(2) Waste Disposal Plan.

THE FOLLOWING IS ADDED AFTER THE THIRD PARAGRAPH:

The hazardous waste generator identification number(s) for use on the manifest are as follows:

Structure No.	**EPA ID No.**

1. Blast Cleaning Requirements.

b. Lead Health and Safety.

THE FIRST PARAGRAPH OF SUBPART (2) IS CHANGED TO:

(2) Lead Health and Safety Plan (LHASP). When over 500 tons of structural steel are to be blast cleaned, the following additional requirements and provisions shall be complied with by the Contractor.

2. Epoxy Mastic Surface Preparation.

a. Pollution Control System.

(2) Hazardous Waste Collection and Disposal.

THE FOLLOWING IS ADDED AFTER THE THIRD PARAGRAPH:

The hazardous waste generator identification number(s) for use on the manifest are as follows:

Structure No.	**EPA ID No.**

SECTION 518 - BRIDGE DECK REHABILITATION

518.01 Description.

518.02 Materials.

A. Repair of Concrete Deck. Quick-setting patching materials classified as Type IA shall be those Type I quick-setting patching materials that contain manufacturer specified mix proportions and have more than 15 pounds of No. 8 coarse aggregate and/or sand added. The mix proportions for the use of products classified as Type IA will be approved by the Bureau of Materials.

Type I
Five Star Highway Patch manufactured by
Five Star Products, Inc.
425 Stillson Road
Fairfield, CT 06430
Telephone: 800-243-2206

Horn 240 manufactured by
A.C. Horn Company
12116 Conway Road
Beltsville, MD 20705-1302
Telephone: 800-654-0402

Set 45 manufactured by
Master Builders, Inc.
23700 Chagrin Boulevard
Cleveland, OH 44122
Telephone: 800-722-8899

Bostik 276 manufactured by
Emhart Chemical Group
UPCO Division
4805 Lexington Avenue
Cleveland, OH 44103

Duracal manufactured by
The United States Gypsum Company
Industrial Gypsum Division
1100 Ashwood Parkway
Suite 300
Atlanta, GA 30338-4769
Telephone: 800-365-5857

D.O.T. Repair Mortar
Rapid Set Products Co.
1023 Dogwood Lane
West Chester, PA 19382

Day Chem Perma Patch manufactured by
Dayton Superior Corporation
P.O. Box 355
First Street and Adams
Oregon, IL 61061

Industrial Fast Setting Cement Mix (IFSCEM 110)
American Stone Mix, Inc.
8320 Bellona Avenue
Towson, MD 21204-2086
Telephone: 410-296-6770

"FX-930" manufactured by
Fox Industries
3100 Falls Cliff Road
Baltimore, MD 21211

Emaco T415 manufactured by
Master Builders, Inc.
23700 Chargin Boulevard
Cleveland, OH 44122

Five Star Cement manufactured by
Five Star Products, Inc.
425 Stillson Road
Fairfield, CT 06430
Telephone: 800-243-2206

Pave Patch 3000 manufactured by
Conspec Marketing Man.
636 South Terance
Kansas City, KS 66111

Type 1A
Five Star Cement manufactured by
Five Star Products, Inc.
425 Stillson Road
Fairfield, CT 06430
Telephone: 800-243-2206

Duracel manufactured by
The United States Gypsum Company
Industrial Gypsum Division
1100 Ashwood Parkway
Suite 300
Atlanta, GA 30338-4769
Telephone: 800-365-5857

Type II
Speedcrete manufactured by
Tamms Industries
1222 Ardmore Avenue
Itasco, IL 61143
Telephone: 312-773-2350

Type III
Horn 240 manufactured by
A.C. Horn Company
12116 Conway Road
Beltsville, MD 20705-1302
Telephone: 800-654-0402

Set 45 manufactured by
Master Builders, Inc.
23700 Chagrin Boulevard
Cleveland, OH 44122
Telephone: 800-722-8899

Type IV
Set 45 “Hot Weather Formula” manufactured by
Master Builders, Inc.
23700 Chagrin Boulevard
Cleveland, OH 44122
Telephone: 800-722-8899

Type V
Emaco R-350 manufactured by
Master Builders, Inc.
23700 Chargin Boulevard
Cleveland, OH 44122

Emaco S88-CA manufactured by
Master Builders, Inc.
23700 Chargin Boulevard
Cleveland, OH 44122

Sika Repair 223 manufactured by
Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071

HD-25 manufactured by
Dayton Superior Corporation
P.O. Box 355
First Street and Adams
Oregon, IL 61061

Polyfast FS manufactured by
Dayton Superior Corp.
First Street and Adams
Chicago, IL 61067

Speedcrete Redline manufactured by
TAMMS Ind.
3835 Route 72
Kirkland, IL 06164

Verticoat Supreme manufactured by
Euclid Chemical Co
5 Joanna Court
East Brunswick, NJ 08816
Telephone: 732-390-9770

Verticoat–2 Part manufactured by
Euclid Chemical Co.
5 Joanna Court
East Brunswick, NJ 08816
Telephone: 732-390-9770

B. Membrane Waterproofing. The membrane waterproofing products are as follows:

W.R. Grace System
Bituthene 5000, Bituthene Primer, and Bituthene Mastic as manufactured by
W.R. Grace Co.
62 Whittemore Avenue
Cambridge, MA 02140
Telephone: 617-976-1400

Royston System
Royston Membrane No. 10A and Royston Bridge Membrane Primer 713A as manufactured by
Royston Laboratories, Inc.
Pittsburgh, PA 15238
Telephone: 412-828-1500

Royston System
Royston Bridge Membrane No. 10-AN and Royston Surf-Prep 744 Primer as manufactured by
Royston Laboratories, Inc.
Pittsburgh, PA 15238
Telephone: 412-828-1500.

Protecto Wrap System
M-400A Membrane, No. 80 Primer, and 160H Mastic as manufactured by
Protecto Wrap Co.
2255 South Delaware Street
Denver, CO 80223
Telephone: 303-777-3001

Mel-DekSea System as manufactured by
W.R. Meadows of PA
2100 Monroe Street
P.O. Box 2284
York, PA 17405
Telephone: 717-792-2627

C. Concrete Deck Overlay Protective Systems. The latex emulsion admixture products are as follows:

Dow Modifier A as produced by
Dow Chemical USA
Functional Products and Systems Department
Midland, MI 48640

Tylac 97-314 as produced by
Reichhold Chemicals, Inc.
P.O. Box 13582
Research Triangle Park, NC 27709

DECO-REZ 4776 as produced by
General Polymers Corporation
3925 Huston Avenue
Cincinnati, OH 45212

Styrofan as produced by
BASF Corporation
3805 Amnicola Highway
Chattanooga, TN 37406

The silica fume concrete admixture products are as follows:

Sikacrete 950 as produced by
Sika Corporation
Lyndhurst, NJ 07071

Force - 10,000 as produced by
W.R. Grace & Co.
2133 85th Street
North Bergen, NJ 07047

Eucon MSA as produced by
The Euclid Chemical Company
19218 Redwood Road
Cleveland, OH 44110-2799

EMSAC F100 as produced by
Elkem Chemical, Inc.
Parkwest Office Center
Cliff Mine Road
Pittsburgh, PA 15275

A certified copy of the test properties shall be furnished as required in Subsection 919.10.

SECTION 519 - PREFABRICATED MODULAR WALLS

519.01 Description.

Prefabricated Modular Wall Systems acceptable for use in the project are as follows:

DOUBLEWAL as manufactured by
The Doublewal Corporation
7 West Main Street
Plainsville, CT 06062
Telephone Number: 860-747-1627

T-WALL as manufactured by
The Neel Company
8328-D Tratford Lane
Springfield, VA 22152
Telephone Number: 703-913-7859

SECTION 520 - MECHANICALLY STABILIZED EARTH (MSE) WALLS

520.01 Description.

The acceptable MSE walls are as follows:

Reinforced Earth as manufactured by
Reinforced Earth Company
8614 Westwood Center Drive, Suite 1100
Vienna, VA 22182-2233
Telephone Number: 703-749-4325

Inter-Loc as manufactured by
Atlantic Concrete Products
8900 Old Route 13
P. O. Box 129
Tullytown, PA 19007
Telephone Number: 215-945-5600

Retained Earth as manufactured by
Foster Geotechnical
1372 Old Bridge Road, Suite 101
Woodbridge, VA 22192
Telephone Number: 703-499-9818

SSL MSE Plus Retaining Wall System as manufactured by
SSL
4740-E Scotts Valley Drive
Scotts Valley, CA 95066
Telephone Number: 831-430-9300

Isogrid Retaining Wall System as manufactured by
The Neel Company
8328-D Traford Lane
Springfield, VA 22152
Telephone Number: 703-913-7859

SECTION 521 - ALTERNATE RETAINING WALL DESIGNS

SECTION 522 - NOISE BARRIERS

522.05 Precast Concrete Noise Barriers.

D. Finishing Concrete Surfaces.

THE FOLLOWING IS ADDED TO SUBPART D.:

The finish shall be _____.

DIVISION 600 - INCIDENTAL CONSTRUCTION

SECTION 605 - CURBS

605.07 Concrete Curbs.

A. Limitations.

THE SECOND ITEM OF THIS SUBPART IS CHANGED TO:

2. Concrete curb shall not be constructed from November 1 to March 15 except at the following locations:

SECTION 617 - TRAFFIC CONTROL

617.03 Traffic Control Devices.

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Effective January 1, 2003 traffic control devices shall be NCHRP 350 compliant with the exception of portable, trailer-mounted, devices including area lighting supports, flashing arrow panels, temporary traffic signals, and variable message signs used in or adjacent to the travel way. In the interim, traffic control devices from the Contractor's current inventory that are not NCHRP 350 compliant may be used. However, newly purchased traffic control devices shall be NCHRP 350 compliant.

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.)

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.

618.10 Defective Stripes or Markings.

STEP 2 OF SUBPART 2 IN THE THIRD PARAGRAPH IS CHANGED TO:

Step 2: All retroreflectance measurements taken with a LTL2000 Retrometer will be made on a clean, dry surface.

618.12 Removal of Traffic Stripes or Traffic Markings.

SUBSECTION IS RENAMED AND CHANGED TO:

618.12 Removal and Replacement of Traffic Delineation Devices.

A. **Removal of Traffic Stripes, Markings, or Reflectors and Castings.** The Contractor shall remove all types of traffic stripes or traffic markings by methods that do not damage the integrity of the underlying pavement or adjacent pavement areas, and that do not cause gouging, or create ridges or grooves in the pavement that

may result in compromising vehicular control. Obliterating stripes or markings by painting over them shall not be permitted.

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

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

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

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

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

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

COMPENSATION

618.14 Method of Measurement.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

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

618.15 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE ADDED:

Pay Item	*Pay Unit*
REMOVAL OF PAVEMENT REFLECTORS AND CASTINGS	UNIT
REMOVAL AND REPLACEMENT OF PAVEMENT REFLECTOR LENSES	UNIT

SECTION 622 - WATER, GAS, AND SANITARY SEWER LINES

622.02 Materials.

622.03 Construction Requirements.

DIVISION 700 - ELECTRICAL

SECTION 706 - INTELLIGENT TRANSPORTATION SERVICES FACILITIES

706.03 Construction Requirements.

706.04 Method of Measurement.

706.05 Basis of Payment.

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:

a 10-foot work strip from the toe of slope and a 15-foot strip from the top of slope or adjacent to drainage ditches constructed under this Contract.

all areas within the right-of-way limits approved for storage of topsoil.

all areas designated for preparation of existing soil as specified under Section 805.

DIVISION 900 - MATERIALS

SECTION 902 - BEAM GUIDE RAIL

902.02 Posts, Timber and Routed Timber Spacers, and Recycled / Synthetic Spacers.

The approved manufacturers are: Lifetime Lumber and Mondo Polymer Technologies, Polylumber.

SECTION 903 – HOT MIX ASPHALT

903.01 Composition of Mixtures.

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

For this Project, the 26 to 50 percent RAP requirements shall govern.

903.03 Sampling and Testing.

THE FOLLOWING NEW SUBPART IS ADDED:

H. Pay Adjustment for HMA and Superpave HMA Mixes. HMA and Superpave HMA Pay Items which are subject to pay adjustment and the base prices are as follows:

DESCRIPTION	UNIT	BASE PRICE
HOT MIX ASPHALT BASE COURSE MIX _____	TON	$35.00
HOT MIX ASPHALT INTERMEDIATE COURSE MIX _____	TON	$40.00
HOT MIX ASPHALT SURFACE COURSE MIX _____	TON	$45.00
SUPERPAVE HOT MIX ASPHALT _____ _____ _____ BASE COURSE	TON	$40.00
SUPERPAVE HOT MIX ASPHALT _____ _____ _____ INTERMEDIATE COURSE	TON	$45.00
SUPERPAVE HOT MIX ASPHALT _____ _____ _____ SURFACE COURSE	TON	$50.00

SECTION 905 - CONCRETE ADMIXTURES AND CURING MATERIALS

905.02 Chemical Admixtures.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Corrosion inhibitor products that are to be used in the fabrication of concrete items shall be as follows:

Calcium Nitrite Based as produced by
W.R. Grace & Company
2133 85th Street
North Bergen, NJ 07047
Telephone: 201-869-5220

Calcium Nitrite Based as produced by
The Euclid Chemical Company
5 Joanna Court
East Brunswick, NJ 08816
Telephone: 732-390-9770

Calcium Nitrite Based as produced by
Master Builders Inc.
798 Welsh Road
Huntingdon Valley, PA 19006
Telephone: 215-938-7501

Calcium Nitrite Based as produced by
SIKA Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Telephone: 800 - 933 - SIKA (7452)

Calcium Nitrite Based as produced by
Great Eastern Technologies, LLC
"Chem Strong CI"
515 Route 528
P. O. Box 3015
Lakewood, NJ 08701
Telephone: 888 - 452 – 9348

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 910 - MASONRY UNITS

910.07 Granite Facing for Pier Shafts.

THE LAST SENTENCE OF THE LAST PARAGRAPH IS CHANGED TO:

The number of cores to be furnished for such tests shall be six.

SECTION 912 - PAINTS, COATINGS, AND MARKINGS

912.13 Inorganic Zinc Coating System.

A complete coating system of an inorganic zinc-rich primer, a high-build epoxy intermediate coat, and a urethane finish coat shall be selected from one of the approved coating systems listed below. All products for the complete system, including thinners and solvents, shall be from the same manufacturer and shall be as follows, or from the current Bureau of Materials Qualified Paints List (QPL):

Code #	Manufacturer	Primer	Intermediate	Finish
IEU-3	Kop-Coat	No. 701	No. 200 HB Epoxy	No. 1122 BRS
IEU-7	Devoe	Catha-Coat (302 A)	Bar-Rust 235	Devthane 359
IEU-11	Valspar Corporation	MZ-7 Inorganic Zinc Rich, 13-F-12 Green	Val-Chem Hi-Build Epoxy 89 Series	Urethane Enamel V40 Series
IEU-13	Con-Lux	Zinc-Plate 21, Type 2	Epolon Multi-Mill	Acrolon II
IEU-14	Carboline	Carbo Zinc 11 HS	Carboline 893	Carbothane 134 HS
IEU-17	Ameron	Dimetcote 21-9	Amercoat 383 HS	Amercoat 450 HS
IEU-18	Elite Coatings Co.	P-159 Inorganic Zinc Primer	E-375 Polyrox High Build Epoxy	Shinethane Urethane LS-5436/LS-5437
IEU-19	International Protective Coatings	Interzinc 22 HS	Intergard 475 HS	Interthane 990 HS

Drying time between coats shall be per the manufacturer's recommendations.

The following information shall be submitted for the system selected at least one month before painting is anticipated:

1. A 1-gallon sample for each coat of paint in the system.
2. Infrared curves (0.1 to 0.6 mils) for each coat. Curves for the dry film of the vehicle (binder) of each component and for the mixed paint shall be included.
3. Weight per gallon, at 77 °F, for each coat. Variance shall be within plus or minus 1.8 ounces of the normal weight per gallon of the sample that was approved and placed on the QPL.
4. Viscosity in Krebs Units, at 77 °F, for each coat. Variance shall be within plus or minus 5 Krebs Units, or equivalent units of another viscometer, of the viscosity of the sample that was approved and placed on the QPL.
5. Percent of solids by weight of each coat.
6. Percent of metallic zinc by weight in the dry film of the cured zinc primer coat. This percentage shall be greater than or equal to that of the sample that was approved and placed on the QPL.
7. Percent of metallic zinc by weight in the zinc pigment component.
8. Finish coat color chips for selection of color by the Engineer.
9. The required curing time and dry film thickness for the qualification of the zinc primer for slip-critical connections in conformance with the requirements of AASHTO, Division I, Table 10.32.3C for Class of Surface B. A certified test report with the slip coefficient tested according to AASHTO Division 1, Article 10.32.3.2.3.
10. Technical data sheets, MSDS, and specific application instructions for all coats. In the event of a conflict between the data/instruction sheets and these Specifications, with the approval of the Engineer, the manufacturer's requirements shall govern. Work shall not be allowed to proceed until the information is received and approved.
11. Mixing and thinning directions.
12. Recommended spray nozzles and pressures.

The Contractor shall submit the manufacturer's recommended repair procedures to correct damage such as that caused in handling and shipping, deficient or excessive coating thickness, removal of zinc salts and other contaminants that would be detrimental to succeeding coats, and procedures for surface preparation and painting of rust spots.

The Contractor shall provide the services of a paint or a painting technical representative from the paint manufacturer at the beginning of operations and whenever required during operations.

Each **c**ontainer of paint shall be labeled to show the name of the manufacturer, the trade name designation of the contents, the lot or batch number, the date of manufacture, and the volumetric contents in gallons or the weight of zinc powder in pounds. Each container shall be labeled according to the Code of Federal Regulations for flammables and shall contain all information necessary to comply with NJSA 34:5A-1 New Jersey Worker and Community Right To Know Act.

912.14 Epoxy Mastic Coating System.

A complete coating system of an aluminum epoxy mastic primer and a urethane finish coat shall be selected from one of the approved coating systems listed below. All products for the complete system, including thinners and solvents, shall be from the same manufacturer and shall be as follows, or from the current Bureau of Materials Qualified Paints List (QPL):

Code #	Manufacturer	Primer	Finish
EU-4	Devoe	Bar-Rust 235	Devthane 359
EU-6	Kop-Coat	Aluminum Epoxy Mastic	No. 1122 BRS
EU-7	Con-Lux	Epolon 81 Aluminum	Acrolon II-2200 Series
EU-9	Carboline	Carbomastic 90 Aluminum	Carbothane 134 HS
EU-10	MAB	Ply-Mastic 101	Ply-Thane 890 HS
EU-11	Birk	Birk Aluminum Mastic Coating No. 50	Birk Aliphatic Polyurethane No. 30
EU-12	Ameron	Amerlock 400 AL	Amercoat 450 HS
EU-13	Sherwin Williams	Epoxy Mastic Aluminum	Hi-Solids Polyurethane B65 Series
EU-14	Mercury Paint	Mermas 100 Epoxy Mastic	Merthane 300 Urethane
EU-15	Valspar	75-A-1 Alumapoxy	Urethane Enamel V40 Series

Drying time between coats shall be per the manufacturer's recommendations.

The following information shall be submitted for the system selected at least one month before painting is anticipated:

1. A 1-gallon sample for each coat of paint in the system.
2. Infrared curves (0.1 to 0.6 mils) for each coat. Curves for the dry film of the vehicle (binder) of each component and for the mixed paint shall be included.
3. Weight per gallon, at 77 °F, for each coat. Variance shall be within plus or minus of the nominal weight per gallon of the sample that was approved and placed on the QPL.
4. Viscosity in Krebs Units, at 77 °F, for each coat. Variance shall be within plus or minus 5 Krebs Units, or equivalent units of another viscometer, of the viscosity of the sample that was approved and placed on the QPL.
5. Percent of solids by weight of each coat.
6. Finish coat color chips for selection of color by the Engineer.
7. Technical data sheets, MSDS, and specific application instructions for all coats. In the event of a conflict between the data/instruction sheets and these Specifications, with the approval of the Engineer, the manufacturer's requirements shall govern. Work shall not be allowed to proceed until the information is received and approved.
8. Mixing and thinning directions.
9. Recommended spray nozzles and pressures.

The Contractor shall submit the manufacturer's recommended repair procedures to correct damage such as that caused in handling and shipping, deficient or excessive coating thickness, removal of zinc salts and other contaminants that would be detrimental to succeeding coats, and procedures for surface preparation and painting of rust spots.

The Contractor shall provide the services of a paint or a painting technical representative from the paint manufacturer at the beginning of operations and whenever required during operations.

Each container of paint shall be labeled to show the name of the manufacturer, the trade name designation of the contents, the lot or batch number, the date of manufacture, and the volumetric contents in gallons or the weight of zinc powder in pounds. Each container shall be labeled according to the Code of Federal Regulations for flammables and shall contain all information necessary to comply with NJSA 34:5A-1 New Jersey Worker and Community Right To Know Act.

912.15 Organic Zinc Coating System.

A complete coating system of an organic zinc-rich primer, a high build epoxy intermediate coat, and a urethane finish coat shall be selected from one of the approved coating systems listed below. All products for the complete system, including thinners and solvents, shall be from the same manufacturer and shall be as follows, or from the current Bureau of Materials Qualified Paints List (QPL):

Code #	Manufacturer	Primer	Intermediate	Finish
OEU-3	Devoe	Catha-Coat 315	Bar-Rust 235	Devthane 359
OEU-7	Porter International	Interzinc 52	Interplus 770	Interthane PSY 999
OEU-15	Valspar	MZ-4 Epoxy Zinc Rich, 13-F-4 Green	Val-Chem Hi-Build Epoxy 89 Series	Urethane Enamel V40 Series
OEU-16	Con-Lux	Zinc-Plate 49, Type 2	Epolon Multi-Mill	Acrolon II
OEU-17	Con-Lux	Zinc-Plate 72e Epoxy Prime	Epolon Multi-Mill	Acrolon II
OEU-18	Carboline	Carboline 858	Carboline 893	Carbothane 134 HS
OEU-19	MAB	Ply-Tile Zinc Rich Primer 520-A-331	Ply-Tile 520-W-360 or Ply-Tile 520-W-45	Ply-Thane 890 HS
OEU-20	Birk	Birk Zinc Rich Epoxy Primer No. 60	Birk High Build Epoxy Coating No. 70	Birk Aliphatic Polyurethene No. 30
OEU-21	Ameron	Amercoat 68 HS	Amercoat 383 HS	Amercoat 450 HS
OEU-22	Sherwin Williams	Zinc Clad IV	Heavy Duty Epoxy B67 Series	Hi-Solids Polyurethane B65 Series
OEU-23	Elite Coatings Co.	P-281 Epoxy Zinc Rich	E-375 Polycrox High Build Epoxy Primer	Shinethane Urethane LS-5436/LS-5437

Drying time between coats shall be per the manufacturer's recommendations.

The following information shall be submitted for the system selected at least one month before painting is anticipated:

1. A 1-gallon sample for each coat of paint in the system.
2. Infrared curves (0.1 to 0.6 mils) for the zinc primer, intermediate, and finish coats to include curves for the dry film of the vehicle (binder) of each component and for the mixed paint.
3. Weight per gallon, at 77 °F, for the zinc primer, intermediate, and finish coats. Variance shall be within plus or minus of the nominal weight per gallon of the sample that was approved and placed on the QPL.
4. Viscosity in Krebs Units, at 77 °F, for the zinc primer vehicle and the intermediate and finish coat paints. Variance shall be within plus or minus 5 Krebs Units, or equivalent units of another viscometer, of the viscosity of the sample that was approved and placed on the QPL.
5. Percent of solids by weight of the zinc primer vehicle and the intermediate and finish coat paints.
6. Percent of metallic zinc by weight in the dry film of the cured zinc primer coat. This percentage shall be greater than or equal to that of the sample that was approved and placed on the QPL.
7. Percent of metallic zinc by weight in the zinc pigment component.
8. Finish coat color chips for selection of color by the Engineer.
9. The required curing time and dry film thickness for the qualification of the zinc primer for slip-critical connections in conformance with the requirements of AASHTO, Division I, Table 10.32.3C for Class of Surface A. A certified test report with the slip coefficient tested according to AASHTO Division 1 Article 10.32.3.2.2.
10. Technical data sheets, MSDS, and specific application instructions for all coats. In the event of a conflict between the data/instruction sheets and these Specifications, with the approval of the Engineer, the manufacturer's requirements shall govern. Work shall not be allowed to proceed until the information is received and approved.
11. Mixing and thinning directions.
12. Recommended spray nozzles and pressures.

The Contractor shall submit the manufacturer's recommended repair procedures to correct damage such as that caused in handling and shipping, deficient or excessive coating thickness, removal of zinc salts and other contaminants that would be detrimental to succeeding coats, and procedures for surface preparation and painting of rust spots.

The Contractor shall provide the services of a paint or a painting technical representative from the paint manufacturer at the beginning of operations and whenever required during operations.

Each container of paint shall be labeled to show the name of the manufacturer, the trade name designation of the contents, the lot or batch number, the date of manufacture, and the volumetric contents in gallons or the weight of zinc powder in pounds. Each container shall be labeled according to the Code of Federal Regulations for flammables and shall contain all information necessary to comply with NJSA 34:5A-1 New Jersey Worker and Community Right To Know Act.

SECTION 913 - PIPE

913.03 Ductile Iron Water Pipe.

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Ductile iron water pipe shall conform to ANSI/AWWA C151/A21.51.

SECTION 914 – PORTLAND CEMENT CONCRETE, MORTOR, AND GROUT

914.02 Portland Cement Concrete Design, Control, and Acceptance Testing Requirements.

THE LIST FOR THE SELECTED STRUCTURAL CONCRETE PAY ITEM ADJUSTMENT HAS BEEN CHANGED TO:

E. Acceptance Testing for Strength for Pay Adjustment Items. Concrete Pay Items which are subject to pay adjustment and the base prices are as follows:

DESCRIPTION	UNIT	BASE PRICE
CONCRETE IN SUPERSTRUCTURE, DECK SLABS	CY	$460.00
CONCRETE IN SUPERSTRUCTURE, DECK SLABS, W/ CORR. INHB. ADMIXTURE	CY	$525.00
CONCRETE IN SUPERSTRUCTURE, PARAPETS	LF	$305.00
PRESTRESSED CONCRETE SLAB BEAMS, (TYPE SII-36), 36" X 15"	LF	$125.00
PRESTRESSED CONCRETE SLAB BEAMS, (TYPE SIII-36), 36" X 18"	LF	$130.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BI-36), 36" X 27"	LF	$170.00
PRESTRESSED CONCRETE SLAB BEAMS, (TYPE SIV-36), 36" X 21"	LF	$160.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BII-36), 36" X 33"	LF	$170.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BIII-36), 36" X 39"	LF	$175.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BIV-36), 36" X 42"	LF	$185.00
PRETENSIONED PRESTRESSED CONCRETE BEAMS, 45"	LF	$155.00
PRETENSIONED PRESTRESSED CONCRETE BEAMS, 54"	LF	$155.00
PRESTRESSED CONCRETE SLAB BEAMS, (TYPE SII-48), 48" X 15"	LF	$160.00
PRESTRESSED CONCRETE SLAB BEAMS, (TYPE SIII-48), 48" X 18"	LF	$135.00
PRETENSIONED PRESTRESSED CONCRETE BEAMS, 63"	LF	$185.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BI-48), 48" X 27"	LF	$215.00
PRESTRESSED CONCRETE SLAB BEAMS, (TYPE SIV-48), 48" X 21"	LF	$215.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BII-48), 48" X 33"	LF	$185.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BIII-48), 48" X 39"	LF	$220.00
PRESTRESSED CONCRETE BOX BEAMS, (TYPE BIV-48), 48" X 42"	LF	$230.00
PRETENSIONED PRESTRESSED CONCRETE BEAMS, 72"	LF	$200.00
PRESTRESSED CONCRETE PILES, DRIVEN	LF	$90.00
CAST-IN-PLACE CONCRETE PILES, DRIVEN, 12" DIAMETER	LF	$30.00
PRECAST CONCRETE PILES, DRIVEN, 12" X 12"	LF	$90.00

SECTION 916 - SIGN MATERIALS

916.10 Breakaway Steel "U" Post Sign Supports.

THE FIRST PARAGRAPH IS CHANGED TO:

Steel "U" post shall be either Ribbak Modified-Flanged channel section as manufactured by Marion Steel Co., Marion, OH or the "U" channel section as manufactured by Highway Steel, Inc., Chicago Heights, IL. The breakaway system shall be the Lap Splice System as manufactured by Marion Steel, Inc. for the Ribbak Modified-Flanged channel section and Safety Splice System as manufactured by Highway Steel, Inc. for the "U" Channel Section, except that the steel "U" posts shall be galvanized after fabrication, including punching and drilling holes, in conformance with ASTM A 123.

SECTION 919 – MISCELLANEOUS

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.