

STATE OF NEW JERSEY
DEPARTMENT OF TRANSPORTATION
TRENTON, NEW JERSEY

**NOTICE TO CONTRACTORS
FEDERAL PROJECT FUNDED BY SANDY RESTORATION FUNDS**

Notice is hereby given that bid proposals will be received via the Internet until 10:00:59 A.M. on 5/30/13, downloaded, and publicly opened and read, from Bidders classified under N.J.S.A. 27:7-35.1 et seq.; in the FACILITY CONFERENCE ROOM-1134N, 1st Floor MOB Building, New Jersey Department of Transportation, 1035 Parkway Avenue, Trenton, NJ 08625; for:

Route 35 Restoration Toms River Township to Mantoloking, From MP 4.00 to MP 9.07, Contract No. 004950321; Paving, Drainage & Structures; Townships of Toms River & Brick, Boroughs of Lavallette & Mantoloking; Ocean County; Federal Project No: ER-7044(104), UPC No: 950321, PE No: 1506505, CE No: 1506519, DP No: 13120.

Project Advertisement Date 5/9/13
Project Bid Date 5/30/13
Estimated Completion Date on 05/01/15
Estimated Range Range between \$50,000,001 to \$100,000,000
Cost of Plans and Contract Documents Available at www.bidx.com.
Contractors Prequalified in one of these
Work Types are eligible to bid this project: 3, 3A or 5

The principal items of work consist of:

Roadway

<u>Quantity</u>	<u>Unit</u>	<u>Description</u>
179,998	CY	Excavation, Unclassified
137,244	SY	Dense Graded Aggregate Base Course, 12" Thick
171,444	T	Hot Mix Asphalt 25 M 64 Base Course
32,837	LF	15" Reinforced Concrete Pipe, Class V
44,597	LF	12" Ductile Iron Water Pipe, Class 52

Bidders are required to comply with the requirements of P.L. 1975, c. 127 N.J.A.C 17:27. For Federal projects, Bidders must register with both the New Jersey Department of Treasury, Division of Revenue pursuant to N.J.S.A 52:32-44 AND the "Public Works Contractor Registration Act", N.J.S.A. 34:11-56.48 et seq. (P.L.2003, c. 91) prior to contract execution. Appropriate proof of these registrations should be provided to NJDOT as soon as possible.

Bids for the above project will be downloaded from the Bid Express website on the Project Bid date (subject to change by addenda) at 10:00:59 a.m. prevailing time, and will be read immediately thereafter. The Bidder must upload their bid prior to the hour named so that it is included in the letting download. Late bids can not be accepted. This is the only vehicle to bid this project; paper bids will not be accepted.

Minimum wage rates for this project shall be as specified in the "Prevailing Wage Determination of the New Jersey Department of Labor and Industry" on file with this Department. The attention of bidders is directed to the provisions covering subletting or assigning the contract. The entire work is to be completed on or before the ESTIMATED COMPLETION DATE STATED ABOVE.

Plans, specifications, and bidding information for the proposed work are available at Bid Express website www.bidx.com. You must subscribe to use this service. To subscribe, follow the instructions on the web site. Fees apply to downloading documents and plans and bidding access. The fee schedule is available on the web site. All fees are directly payable to Bid Express.

PLEASE CHECK THE EXPIRATION DATE OF YOUR ASSIGNED CLASSIFICATION

Copies of the current Standard Specifications may be acquired from the Department at the prevailing fee. Drawings and supplementary specifications may also be inspected (**BUT NOT OBTAINED**) by contracting organizations at our Design Field Offices at the following locations:

200 Stierli Court
Mt. Arlington, NJ 07856
Phone: 973-601-6690

One Executive Campus Rt. 70 West
Cherry Hill, NJ 08002
Phone: 856-486-6623

New Jersey Department of Transportation
Division of Procurement
Bureau of Construction Services
1035 Parkway Avenue
PO Box 600
Trenton, NJ 08625

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0 Plan Sheets

**ROUTE 35 RESTORATION
TOMS RIVER TOWNSHIP TO MANTOLOKING
FROM MP 4.00 TO MP 9.07
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FEDERAL PROJECT NO. ER-7044 (104)**

ADDENDUM NO. 1

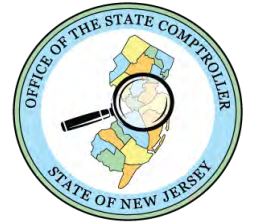
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The following CHANGE is made to the NJDOT Special Provisions:

107.01.01 Applicable Law

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

Pursuant to Executive Order 125, the Contractor must ensure that the attached fraud prevention notice is prominently displayed at the project site for the duration of the Contract. Ensure the size of the notice is a minimum of 8 ½" X 11".



SANDY REBUILDING AND RECONSTRUCTION FRAUD PREVENTION HOTLINE

**TO PREVENT FRAUD PLEASE
REPORT ANY SUSPICION OF:**

- **FRAUDULENT ACTIVITY**
- **THEFT**
- **WASTE**
- **BRIBES OR KICKBACKS**
- **UNETHICAL OR ILLEGAL CONDUCT**

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(1-855-672-8477)

OR CONTACT US AT

comptrollertips@osc.state.nj.us

ALL COMMUNICATIONS WILL BE KEPT CONFIDENTIAL

State of New Jersey/Office of the State Comptroller

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The following CHANGES are made to the Plans:

Plan Sheets 176 thru 246 (UC-1 thru UC-70) are being reissued. The existing features on these plans have been darkened slightly to provide better clarity of the text.

The following are questions received from plan holders and the responses:

QUESTION # 1 from George Harms Construction Co., - The existing utility information shown on the utility plans (Plan Pgs. 176-246), specifically the rim and invert information, is not legible. Please provide plan pages that include lines & text for the existing utilities that are dark enough to be legible.

RESPONSE: Refer to PLAN CHANGES in this Addendum.

QUESTION # 2 from Vollers, Inc. - Please clarify if the water companies will be providing all the required pipe, valves and fittings for this project similar to the arrangement for the last Route 35 project DP13114. What is confusing me is on page 47 of 84 of the Special Provisions, Section 651 "Water it states "for all water companies, the acceptable pipe suppliers are"

page 50 of 84 it states "NJAW will provide marker balls" 14 That is helpf
miles of ductile iron pipe is of a greater concern. Please clarify exactly what materials the contractor is responsible to supply.

RESPONSE: All materials required for water utility construction are to be supplied by the Contractor except for the following materials specifically identified in the Special Provisions and Contract Plans:

- Marker balls
- Replacement fire hydrant parts
- Valves identified as "furnished by others" on Plan Sheet 253 (UCD-4) "Typical Side Street Water Main Connection Detail".

QUESTION # 3 from Vollers, Inc. - In our past experience working with NJAW temporary water services are required to be provided to all homeowners during the installation and or replacement of the new water service. They also require that we tie-in any intersecting water

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mains, which there are quite a few of on this project. Please clarify the extent of temporary water required and tie-in requirements.

RESPONSE: The need for temporary services is not anticipated as NJAW allows service interruptions for the construction of cut-overs. Subsection 651.03.01A. of the Special Provisions requires that the Contractor submit a detailed sequencing plan of the water main construction, including service cut-overs.

QUESTION # 4 from Vollers, Inc. - The project completion date is listed as 05/01/2015 on the notice to contractors. Referencing page 387 of 630 Traffic Control and Staging Plans; notes traffic control plans 14; note A "œno lane closure will be permitted until September 3, 2013. Also no lane closures will be permitted from 12:00 PM June 26, 2014 through 12:00 September 9, 2014. On the same page the project is also limited to day and swing shifts. Since the bulk of the new piping is being installed in the R.O.W. ; without lane closures this work just cannot be performed. The main-line utility work cannot commence before September 2014 and can go for roughly a 9 month period until it is shut down again. Although the project is on the shore and a little warmer, some time will be lost during the winter, best case scenario we will only lose a month, leaving an 8 month work period. This restriction takes what would normally 21 month project and reduces it to a 16 month project.

RESPONSE: As indicated in Subsection 108.10 of the Special Provisions, the Department is advising Contractors that the project schedule is compressed and must be staffed and scheduled accordingly to meet the established completion dates.

QUESTION # 5 from Vollers, Inc. - Being that there is substantial restoration work to be performed after the utility installation is completed, such as 18 miles of concrete curbing and over a ¼ million tons of asphalt to be installed, that cuts the utility installation time down to about 10 months if the final completion date is to be achieved. With the holiday work restriction added into the equation that cuts roughly 3 days a month of productive time off. That gives us 8.5 months of actual work days to install the utilities. Just taking the water-main for example which equals over 76,000 feet, it would require an average of 450 feet of pipe to be installed per day. If this project was wide open new installation that would be achievable. With 400 homes to provide water to, existing utilities to deal with, and over 50 side streets to tie-in it just does not seem realistic.

RESPONSE: Please refer to the response to Question #4.

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QUESTION # 6 from Vollers, Inc. - There is only some many crews that we can utilize in the given work areas provided, being that the critical path is not how much pipe that we can install in a given shift, but keeping the homeowners in service and having everything tied in at the end of the day so as not to disrupt the homeowners. For this scenario to work we would have to go ahead of the other utility and roadwork crews, and install the water main ahead of them and installing temporary paving behind us.

Please clarify the NJDOTS thoughts on how the utility installation would be achieved in this limited time duration?

RESPONSE: Please refer to the response to Question #4.

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The following CHANGES are made to the Proposal:

Sequence No.	Item No.	Item	Remarks
38	202006M	EXCAVATION, TEST PIT	Quantity Change
55	401108M	CORE SAMPLES, HOT MIX ASPHALT	Quantity Change
146	610003M	TRAFFIC STRIPES, LONG-LIFE, EPOXY RESIN 4"	Quantity Change
174	652007P	16" DUCTILE IRON SEWER PIPE	Item Deleted

Revised Estimate- Distribution of Quantity Plan Sheets reflecting this change will not be issued at this time, but all corrections will be made during the preparation of the As-Built plans.

This proposal change is available from NJDOT Bid Express website as Amendment # 1

The following CHANGES are made to the Special Provisions:

108.12 RIGHT-OF-WAY RESTRICTIONS

REPLACE the "Property and Vacation/Availability Dates" table with the following:

Demolition and/ or Parcel No	Approximate Baseline Station	Offset/Direction	Date
E79	1720+80 SB	1460' / LT	September 1, 2013
TE80A	1720+80 SB	1480' / LT	August 1, 2013
TE80B	1720+80 SB	1500' / LT	August 1, 2013
TE80C	1777+00 SB	1520' / LT	August 1, 2013
TE80D	1777+00 SB	1530' / LT	August 1, 2013
TE80E	1986 +75 SB	1660' / LT	August 1, 2013
TE80F	1995+40 SB	1690' / LT	August 1, 2013
TE80G	2015+85 SB	990' / LT	August 1, 2013
TE80H	2015+85 SB	980' / LT	August 1, 2013
TE80I	2021+85 SB	960' / LT	August 1, 2013
TE80J	2021+85 SB	950' / LT	August 1, 2013

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Demolition and/ or Parcel No	Approximate Baseline Station	Offset/Direction	Date
TE80K	2038+75 SB	570' / LT	August 1, 2013
TE80L	2038+75 SB	560' / LT	August 1, 2013
TE80M	2051+00 SB	100' / LT	August 1, 2013
TE80N	2054+00 SB	100' / LT	August 1, 2013
TE80O	2060+70 SB	70' / LT	August 1, 2013
TE80P	2065+70 SB	160' / LT	August 1, 2013
TE80Q	2081+80 SB	55' / LT	August 1, 2013
TE80R	2097+30 SB	40' / RT	August 1, 2013
TE80S	2097+30 SB	50' / RT	August 1, 2013
TE80T	2104+80 SB	40' / LT	August 1, 2013
TE80U	2108+80 SB	60' / LT	August 1, 2013
TE80V	2116+75 SB	95' / LT	August 1, 2013
TE80W	2125+00 SB	95' / LT	August 1, 2013
TE80X	2131+10 SB	85' / LT	August 1, 2013
TE80Y	2140+35 SB	195' / LT	August 1, 2013
TE80Z	2165+90 SB	90' / LT	August 1, 2013
TR80AA	2189+25 SB	180' / LT	August 1, 2013
TE80BB	2198+50 SB	90' / LT	August 1, 2013
TE80CC	2205+00 SB	50' / LT	August 1, 2013
TE80DD	2209+70 SB	40' / LT	August 1, 2013
E81A	2015+50 SB	900' / LT	October 1, 2013
E81B	2022+20 SB	800' / LT	October 1, 2013
E81C	2038+75 SB	490' / LT	October 1, 2013
E82	2054+00 SB	60' / LT	June 1, 2014
E83	2054+10 SB	60' / LT	June 1, 2014
E84	2060+64 SB	50' / LT	October 1, 2013
E85	2131+00 SB	80' / LT	October 1, 2013
E86	2131+30 SB	80' / LT	November 1, 2013
E87	2140+25 SB	205' / LT	June 1, 2014
E88	2165+80 SB	50' / LT	October 1, 2013
E89	2177+80 SB	50' / LT	June 1, 2014

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652.03.01 Sewer Pipe

E. Installing Sanitary Sewer Gravity and Force Mains.

AMEND the last sentence TO READ "For Brick Utilities, install concrete cradles at locations where new sanitary mains are joined to existing sanitary mains."

The following are questions received from plan holders and the responses:

QUESTION # 1 from George Harms Construction Co., Inc.:

Abandoned BASF (Ciba-Geigy) pipeline - Spec section 201.03.01.E.2 refers to the abandoned BASF (Ciba-Geigy) pipeline along Second Avenue. The drawings do not identify any valves, or the locations of seals along this pipe. Is the section of pipe between Bay Ave and Rt 35 northbound sealed off independently, or would we need to dewater an amount of liquid all the way back to the main land, or out into the ocean? Please provide bidders the locations of any seals that were installed on this pipe so we can estimate how much liquid might have to be removed.

RESPONSE: The pipeline was previously drained as part of the abandonment of the line. Available records indicate caps located at Bay Boulevard and at the ocean. Based on information provided by local utility companies that have encountered the line on past projects, it is anticipated that some groundwater may have infiltrated the pipe but it is not expected that the pipe is fully filled.

QUESTION # 2 from George Harms Construction Co., Inc.:

Concrete cradles - The tie-in details on page UCD-7 (page 256) only show a concrete cradle for the sewer pipe tie-ins at the Brick Utility locations, not for Lavallette or TRMUA. However spec section 652.03.01.E (page 57) added that we are to install concrete cradles where new sanitary sewer mains are joined to existing mains. Please clarify if concrete cradles are required at all tie-in locations or only for locations within Brick Township.

RESPONSE: Concrete cradles for tie-ins between new and existing sanitary sewer pipes are only required for facilities owned by Brick Utilities. Refer to SPECIFICATION CHANGES in this Addendum.

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QUESTION # 3 from George Harms Construction Co., Inc.:

16" DI Sewer Pipe - We don't see where Bid Item 174- 16" DI Sewer Pipe is located on the plans, and it appears it may have been confused with the 16" DI Water Pipe. Please indicate where this bid item is located or delete the item if necessary.

DI Sewer Pipe
 DI Water Pipe

RESPONSE: Item is deleted. Refer to PLAN CHANGES in this Addendum.

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The following CHANGES are made to the Plans:

Attachment No. Description

Attachment No. 1 D-2, revisions as clouded
Attachment No. 2 D-51, revisions as clouded
Attachment No. 3 D-52, revisions as clouded

The following CHANGES are made to the Proposal:

Sequence No.	Item No.	Item	Remarks
56	601128P	24" REINFORCED CONCRETE PIPE	Quantity Change
64	601598P	19" X 30" REINFORCED CONCRETE ELLIPTICAL PIPE, CLASS HE-III	Quantity Change
78	602012M	INLET, TYPE B	Quantity Change
171	652003P	12" DUCTILE IRON SEWER PIPE	Quantity Change
177	652021P	30" DUCTILE IRON SEWER PIPE	Quantity Change
440	601683M	30" DUCTILE IRON PIPE	Item Added

Revised Estimate- Distribution of Quantity Plan Sheets reflecting this change will not be issued at this time, but all corrections will be made during the preparation of the As-Built plans.

This proposal change is available from NJDOT Bid Express website as Amendment # 2.

The following CHANGES are made to the Special Provisions:

201.03.01 Clearing Site

E. Removing Pipe, Inlets, and Manholes.

- 2. BASF (formerly Ciba-Geigy) abandoned pipeline.**

ADD:

The Department will make payment for disposal fees exceeding \$500 as specified in 109.03.

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601.02 MATERIALS

ADD the following before the first paragraph:

THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS:

Ductile iron pipe for storm drainage applications shall conform to ANSI A21.51 with push-on joints and a thickness class of 56.

601.04 MEASUREMENT AND PAYMENT

ADD the following pay item:

<i>Item</i>	<i>Pay Unit</i>
30" DUCTILE IRON PIPE	LINEAR FOOT

652.02 MATERIALS

Force Mains:

AMEND the third sentence of the first paragraph TO READ "Use Mechanical Joint C153 Ductile Iron Compact Fittings by Tyler Union®."

ADD the following after the first paragraph:

Provide ceramic epoxy lining to interior of ductile iron sewer pipe and fittings. Use Protecto 401™ Ceramic Epoxy Lining by Induron Coatings, Inc.

Provide restrained flange adapter for ductile iron force mains. Use Series 2100 MEGAFLANGE® Restrained Flange Adapter by EBAA Iron Inc.

Manholes:

ADD the following after the fourth paragraph:

Provide elastomeric lining for OCUA reconstructed manholes. Use Manhole ChimneySeal No. F-88 by Sauereisen.

AMEND the list of products/manufacturers on pages 54-56 as follows:

ADD the following to the available products from EBAA, Inc.: Series 2100 MEGAFLANGE® Restrained Flange Adapter

ADD the following to the available products from Sauereisen: Manhole ChimneySeal No. F-88

ADD the following products/manufacturers:

Mechanical Joint C153 Ductile Iron Compact Fittings are available from the manufacturer at the following address:

Tyler Union®
11910 CR 492
Tyler, TX 75706

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(800)-527-8478

Protecto 401™ Ceramic Epoxy Lining is available from the manufacturer at the following address:

Induron Coatings, Inc.
3333 Richard Arrington Jr. Blvd. N
Birmingham, AL 35234-2303
(888)-773-2401

652.03.01 Sewer Pipe

A. Scheduling of Work.

ADD the following after the first paragraph:

If bypass pumping is required, coordinate all efforts with the respective municipal utility authority and use the following rates for estimation purposes:

1. For TRMUA, estimate the flow rate at 250 gal/day/house.
2. For Brick Utilities, estimate the flow rate at 200-300 gal/day/house.
3. For Borough of Lavallette, estimate the flow rate at 200-300 gal/day/house.

ADD the following at the end of the second paragraph:

Coordinate all efforts with OCUA and provide appropriate measures to contain and properly dispose of any residual liquid if encountered. Avoid peak seasonal flows (e.g. summer, holidays, weekends and weather conditions (e.g. flooding due to heavy rains) as specified by OCUA. Note the following:

Work associated with the installation of the 14-inch and 20-inch PVC pipe offsets:

- 1) OCUA Pump Station CPS-1 can operate on either single force main – the 14-inch or the 20-inch - and normal operation is for the use of the 20-inch force main. CPS-1 can operate on the 14-inch with the exception of high seasonal flows and weather events. CPS-1 valve operation must be verified.
- 2) The existing sections located at Bay Boulevard & Newark Avenue are near the discharge manhole and at the high portion of the force main, therefore they will have minimal liquid within the force mains.
- 3) At Bay Boulevard & Jersey City Avenue, there is approximately 1,300 feet of force main upstream from the proposed offsets. The 14-inch force main contains approximately 10,500 gallons and the 20-inch force main contains approximately 21,000 gallons. Drain time consists of approximately 3 to 4 hours.
- 4) At Bay Boulevard & Washington Avenue, there is approximately 3,350 feet of force main upstream from the proposed offsets. The 14-inch force main contains approximately 26,800 gallons and the 20-inch force main contains approximately 54,700 gallons. Drain time consists of approximately 3 to 4 hours.
- 5) At Bay Boulevard & Brown Avenue, there is approximately 4,250 feet of force main upstream from the proposed offsets. The 14-inch force main contains approximately 34,000 gallons and the 20-inch force main contains approximately 69,500 gallons. Drain time consists of approximately 3 to 4 hours.
- 6) At Bay Boulevard & Bond Avenue, there is approximately 6,050 feet of force main upstream from the proposed offsets. The 14-inch force main contains approximately 48,400 gallons and the 20-inch force main contains approximately 98,800 gallons. Drain time consists of approximately 3 to 4 hours.
- 7) To eliminate multiple shutdowns and force main draw downs, OCUA requires all work to be completed on the 14-inch force main prior to the work on the 20-inch force main.

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Work associated with the replacement of the existing 12-inch ductile iron force main with 12-inch PVC force main:

- 1) OCUA Pump Station CPS-16 (at Route 35 NB & Fifth Avenue) will need to operate through the existing 6-inch force main while the work is being completed.
- 2) The use of the existing 6-inch force main is conditioned upon seasonal flow influences and weather events.
- 3) The 12-inch force main contains approximately 13,000 gallons and has a drain time of approximately 3 to 4 hours.

Work associated with the installation of the 30-inch ductile iron pipe offset:

- 1) This work is in close proximity to an existing air-release manhole and man-way on the existing 30-inch cast iron force main (CI-2/Alternate Bay Crossing). Pipe anchorage in the area of the proposed man-way access must be reviewed to ensure sufficient room is available.
- 2) The offset is approximately 3-1/2 feet vertical to clear the proposed storm sewer.
- 3) The CI-2/Alternate Bay Crossing generally has no flow as it is an alternate crossing and is only used during periods of heavy rain and high seasonal flows. In service flows typically range from 3 to 4 MGD and full service flows are approximately 6 MGD with observed peaks as high as 17 MGD. The CI-2/Alternate Bay Crossing force main must be available during peak seasonal flows and during certain weather conditions.
- 4) OCUA is currently replacing the magnetic flow meter at OCUA Pump Station CPS-19 and the installation will require the use of the CI-2/Alternate Bay Crossing force main. Installation of the offset will be prohibited during this time (approximately 3 days).

Work associated with the replacement of the 36-inch reinforced concrete sanitary sewer pipe:

- 1) This will require the setup of by-pass pumping coordinated with OCUA.
- 2) The average flow rate for this pipe is approximately 1.5 MGD and the peak flow rate is approximately 4.0 MGD.
- 3) Direct residential connections into the OCUA interceptor exist along this line and will be impacted by any surcharge.

652.03.06 Reconstruct Sanitary Sewer Manhole

ADD the following at the end of the second paragraph:

Restore disturbed liners of OCUA reconstructed manholes. Spray protective polymer lining on entire manhole interior surface and in accordance to the manufacturer's recommendations. Do not apply lining until concrete repair products have sufficiently cured. Brush or trowel sprayed epoxy to fill holes and apply finish before product becomes tacky. After epoxy lining has cured, apply by hand or trowel elastomeric lining in accordance to the manufacturer's recommendations. Apply to cover interior casting vertical surface, riser rings or courses of brick or block, and the top 2 inches of manhole cone or riser section. Elastomeric lining will overlap epoxy lining. Do not apply to horizontal casting surfaces or surfaces in contact with manhole cover.

The following are questions received from plan holders and the responses:

QUESTION # 1 from George Harms Construction Co., Inc.:

San sewer along Bay Ave. - The contract requires relocation of the 14" Sanitary Sewer Force Mains at numerous cross street intersections along Bay Ave (Bid Item and 20"

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#186 & 187). What are the allowable shut down hours for these force mains, and how long can each pipe be shut down continuously to perform these relocations? And can both force mains be shut down at the same time? Also, please identify at each intersection if these are high points or low points of the line, so the contractor can determine how much of the existing force line product will have to be handled each time the pipe is cut into. Please provide this information as soon as possible so the bidders can price this work accordingly.

RESPONSE: Refer to SPECIFICATION CHANGES in this addendum.

QUESTION # 2 from George Harms Construction Co., Inc.:

San sewer force main along Rt 35 & Fifth Ave. - The contract requires replacement of a 12" Force Main along Rt 35 Southbound and Fifth Avenue (Bid Item #189). What are the allowable shut down hours for this force main, and how can the pipe be shut down continuously to perform this replacement? Also, please clarify if these replacement locations are high points or low points of the line, so the contractor can determine how much of the existing force line product will have to be handled each time the pipe is cut into. Please provide this information as soon as possible so the bidders can price this work accordingly.

RESPONSE: Refer to SPECIFICATION CHANGES in this addendum.

QUESTION # 3 from George Harms Construction Co., Inc.:

36" San Sewer flow rates - Bid Item #179 is for 36" Pipe replacement. It appears this existing line is the main collector sanitary sewer line for a large portion of the barrier island leading to the pump facility. It appears the flow will need to be by-pass pumped while the pipe is removed and new pipe/MH the bidding contractors need to know the daily/hourly flow rates of this pipe. There are also numerous smaller sanitary sewer replacements throughout the project limits, so please also provide typical flow rates for each smaller size pipe that needs to be replaced. We request this information be provided to all bidders as soon as possible in order to provide accurate pricing for this work.

RESPONSE: Refer to SPECIFICATION CHANGES in this addendum.

QUESTION # 4 from George Harms Construction Co., Inc.:

30" D.I. Sewer Pipe - Bid Item #177 drainage item, as it is on Drawing D-2, and D-51. It appears this item also includes a 30" Sanitary Sewer Pipe replacement shown on drawing UC-37. This 20Lf shown on drawing UC-

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37 needs to be its own bid item. This work involves replacing a 30" dia. San Main, which appears to be the major sanitary feed for the barrier island, back to the main land. This work is drastically different and more expensive than installing a new 30" stor pipe, and needs to be its own item. Regarding this 30" sanitary contractors need information related to the line in order to price up the work properly. Please provide allowable hours that this line can be shut down for the replacement work, and clarify how long the line can be continuously shut down for the contractor to complete this work. Also, clarify if this location is a high point, or low point along the force main, and tells us how much footage of force main will have to be dealt with when the pipe is cut into (gallons of sewage that will have to be pumped out of the existing 30" pipe), and should be handled since there is no direction in the plans & specs. We do not see a detail for this force main replacement work, so either add one or direct us to where it is shown in the plans currently.

RESPONSE: Refer to PLAN CHANGES, PROPOSAL CHANGES, and SPECIFICATION CHANGES in this addendum. Note: a detail for the 30" force main replacement will be provided in a subsequent addendum.

QUESTION # 5 from George Harms Construction Co., Inc.:

Drainage item quantities on DOQ drawings - The Distribution of Quantity (DOQ) drawings, and therefore the bid item proposal quantities include quantities from drawing D-2 for several drainage bid items which we believe are a mistake. We have reviewed drawing D-2 and cannot locate these items or quantities anywhere on these drawings. Please review bid items #171 and #78 specifically related to drawing #D-2. We believe these bid item proposal quantities need to be decreased accordingly. We also see that Item #64 has 314LF shown on drawing D-52, but it does not appear to be included on the DOQ or proposal quantity, therefore we think this item needs to be increased.

RESPONSE: Refer to PLAN CHANGES and PROPOSAL CHANGES in this addendum.

QUESTION # 6 from Northeast Remsco Construction, Inc.:

The date for substantial completion is December 1, 2014 and final completion is May 30, 2015. Due to the accelerated time schedule and the fact that the shore season does not really begin until after Memorial Day, will the Department consider changing the substantial completion date to May 22, 2015 and change the final completion date to November 30, 2015?

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RESPONSE: No. Please note that Substantial Completion for this Contract does not require that the final surface course be completed (refer to Subsection 101.03 of the Special Provisions).

QUESTION # 7 from Northeast Remsco Construction, Inc.:

Asbestos Cement Pipe - The Asbestos Cement Pipe will be broken and damaged during the excavation for the new pipe. Since it is extremely expensive and quite difficult to recover the broken pipe, on DEP funded contracts, the DEP has allowed sewer contractors to crush the Asbestos Cement Pipe and leave it in the backfill. Will the Department accept this method of disposal?

RESPONSE: No. Where the existing pipe is in conflict with the proposed construction, it must be removed from the site in accordance with the Special Provisions.

QUESTION # 8 from Northeast Remsco Construction, Inc.:

Conflicts with Utility Connections - The gravity sewer and storm sewer lines are shallow. As a result, we expect numerous conflicts with sewer, gas and water house connections, as well as conflicts at the intersections. This will add extra costs to the contract and delay the progress of the job. Since the schedule for completion is accelerated, how will the Department handle these conflicts? Since no one knows the depth of the existing utilities, will the Department consider them as differing site conditions?

RESPONSE: Prior to initiating work, the Contractor is required to conduct utility investigations as specified in Subsection 105.07.01B of the Special Provisions. For utility work to be constructed by the Contractor, the new utilities, including utility services, are to be installed in Stage 1 so that there will not be a conflict with the proposed infrastructure to be constructed in subsequent stages. It is anticipated that water mains and sanitary sewer force mains will require alignment adjustments, both horizontal and vertical, to avoid conflicts. In addition, for utility work performed by the utility owners, the Contractor must provide the owners with layout information to ensure that the relocated facilities do not conflict with the proposed construction.

QUESTION # 9 from Union Paving Construction Co., Inc.:

Existing House Services - It appears that the potential exists for numerous house services (water, gas and sewer) to be in conflict with the proposed storm sewer. 1.) Who is responsible to temporarily relocate water services until the new water main is installed, should they conflict? 2.) Who will be responsible to relocate existing gas services should they conflict? 3.) Who will be responsible to relocate existing sewer services should they conflict? "who is

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responsible" is a two part question; A.)Who will be responsible to do the work? B.)Who will be responsible to pay for the work?

RESPONSE: As indicated in the Contract Plans, utility work, including utility services, is to be constructed in Stage 1 and the roadway drainage facilities in Stage 2. The Contractor is responsible for ensuring that the relocated utilities and services do not conflict with the proposed construction (refer to the response to Question #8 above).

QUESTION # 10 from Northeast Remsco Construction, Inc.:

Groundwater Treatment - If H₂S is encountered during dewatering, do we have to treat the groundwater before disposal? If yes, please provide the specifications for the treatment of the water.

RESPONSE: If encountered, H₂S levels are not anticipated to be significant enough to require treatment.

QUESTION # 11 from Crisdel Group, Inc.:

BASF (formerly Ciba-Geigy) abandoned pipeline - With regard to specification page 26 E.2, it is stated the contractor is to coordinate with Toms River to pay fees associated with removal & discharge of the effluent. Currently it is not possible to verify the quantity of liquid being disposed of to accurately price this disposal. In addition, it is not clear if the OCUA will even accept this material. Will the state please consider a fixed cost allowance to pay for the disposal fees associated with this activity or a time & material reimbursement for the liquid disposal.

RESPONSE: Disposal fees are anticipated to be less than \$500. If the fees exceed this amount, reimbursement will be made in accordance with Subsection 109.03. Refer to SPECIFICATION CHANGES in this addendum. Also, if the liquid is determined to be unacceptable to OCUA, the Department will make payment for this disposal on a force account basis as indicated in the Special Provisions.

QUESTION # 12 from George Harms Construction Co., Inc.:

Ductile Iron Storm Sewer Specification - Bid Items 171 to 178 are for Ductile Iron Storm Sewer Pipe, but there is no material specification in either the Standard or Supplemental Spec. Please provide a material specification for these storm sewer pipe items.

RESPONSE: Refer to SPECIFICATION CHANGES in this addendum.

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QUESTION # 13 from George Harms Construction Co., Inc.:

Concrete pipe at outfall structures #17 & #18 - Contract Drawing D-54 shows 36" RCCP going to outfall structure #17 & #18, and there are 36" dia Slip On Check Valves at the end of each pipe. Contract Drawing #S-19 which is the structural detail at these outfall locations shows the outfall pipes to be 24" RCCP, and 30" RCCP. We believe drawing S-19 is incorrect. Please review and confirm pipe sizes at these outfall structures.

RESPONSE: Both of the pipes at these outfalls are 36" RCCP.

QUESTION # 14 from JBL Electric:

JCP&L Utility Package - I wanted to inquire when the JCP&L Utility Package will be posted to the site.

RESPONSE: Posted on May 10, 2013.

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The following CHANGES are made to the Plans:

<u>Attachment No.</u>	<u>Description</u>
Attachment No. 1	D-52, revisions as clouded
Attachment No. 2	D-63, revisions as clouded
Attachment No. 3	UC-3, revisions as clouded
Attachment No. 4	UC-4, revisions as clouded
Attachment No. 5	UC-5, revisions as clouded
Attachment No. 6	UC-6, revisions as clouded
Attachment No. 7	UC-7, revisions as clouded
Attachment No. 8	UC-8, revisions as clouded
Attachment No. 9	UC-9, revisions as clouded
Attachment No. 10	UC-10, revisions as clouded
Attachment No. 11	UC-11, revisions as clouded
Attachment No. 12	UC-55, revisions as clouded
Attachment No. 13	Replaces original plan sheet 232 (UC-56) – existing water main location revised
Attachment No. 14	UCD-7, revisions as clouded
Attachment No. 15	S-3, revisions as clouded
Attachment No. 16	S-4, revisions as clouded
Attachment No. 17	S-10, revisions as clouded
Attachment No. 18	S-11, revisions as clouded
Attachment No. 19	S-14, revisions as clouded
Attachment No. 20	S-15, revisions as clouded
Attachment No. 21	S-16, revisions as clouded
Attachment No. 22	S-17, revisions as clouded
Attachment No. 23	S-18, revisions as clouded
Attachment No. 24	S-19, revisions as clouded
Attachment No. 25	S-20, revisions as clouded
Attachment No. 26	S-21, revisions as clouded
Attachment No. 27	S-22, revisions as clouded
Attachment No. 28	S-23, revisions as clouded
Attachment No. 29	S-24, revisions as clouded
Attachment No. 30	S-25, revisions as clouded
Attachment No. 31	S-26, revisions as clouded

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Attachment No. 32 S-27, revisions as clouded
Attachment No. 33 S-28, revisions as clouded
Attachment No. 34 S-29, revisions as clouded
Attachment No. 35 S-30, revisions as clouded
Attachment No. 36 S-31, revisions as clouded
Attachment No. 37 S-32, revisions as clouded

The following CHANGES are made to the Proposal:

Sequence No.	Item No.	Item	Remarks
57	601132P	30" REINFORCED CONCRETE PIPE	Quantity Change
106	602229M	MANUFACTURED TREATMENT DEVICE (TYPE 7)	Quantity Change
107	602229M	MANUFACTURED TREATMENT DEVICE (TYPE 8)	Quantity Change
159	651063P	12" DUCTILE IRON WATER PIPE, CLASS 52	Quantity Change
160	651069P	16" DUCTILE IRON WATER PIPE, CLASS 52	Quantity Change
168	651272M	12" VALVES AND BOXES	Quantity Change
169	651274M	16" VALVES AND BOXES	Quantity Change
275	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
283	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
296	502350M	CONCRETE-FILLED FIBERGLASS PIPE PILE, FURNISHED, 16" DIAMETER	Quantity Change
297	502351M	CONCRETE-FILLED FIBERGLASS PIPE PILE, DRIVEN, 16" DIAMETER	Quantity Change
310	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
318	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
326	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
334	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
342	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
350	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
358	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change

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Sequence No.	Item No.	Item	Remarks
366	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
374	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
382	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
390	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
398	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
401	502350M	CONCRETE-FILLED FIBERGLASS PIPE PILE, FURNISHED, 16" DIAMETER	Quantity Change
402	502351M	CONCRETE-FILLED FIBERGLASS PIPE PILE, DRIVEN, 16" DIAMETER	Quantity Change
403	502352M	FIBERGLASS PIPE PILE, FURNISHED, 12" DIAMETER	Quantity Change
404	502353M	FIBERGLASS PIPE PILE, DRIVEN, 12" DIAMETER	Quantity Change
407	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
415	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
423	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
431	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change
439	511015P	FIBERGLASS REINFORCED PLASTIC LUMBER	Quantity Change

Revised Estimate- Distribution of Quantity Plan Sheets reflecting this change will not be issued at this time, but all corrections will be made during the preparation of the As-Built plans.

This proposal change is available from NJDOT Bid Express website as Amendment # 3.

The following CHANGES are made to the Special Provisions:

109.01 MEASUREMENT OF QUANTITIES

AMEND the second sentence TO READ: The Department will measure quantities of both Measured and Proposal Items for payment.

ADD the following:

THE LAST PARAGRAPH IS CHANGED TO:

The Department will measure quantities for Proposal Items.

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651.02 MATERIALS

ADD the following:

For 16" water mains, NJAW will furnish pipe, fittings, valves and valve boxes to the site.

651.04 MEASUREMENT AND PAYMENT

ADD the following:

Payment for 16" DUCTILE IRON WATER PIPE, CLASS 52 and 16" VALVES AND BOXES is for installation of these items. The utility owner will supply materials.

652.02 MATERIALS

Force Mains:

AMEND the first sentence TO READ: "For ductile iron sewer pipe, use TYTON JOINT® Pipe, pressure Class 200 psi, by U.S. Pipe.

ADD the following to the first paragraph:

Provide restraint harnesses for ductile iron force mains. Use Series 1700 MEGALUG® Restraint Harness by EBAA Iron Inc.

Provide coal tar epoxy for ductile iron pipe joints. Use Bitumastic® 300M by Carboline®.

ADD the following to the available products from EBAA Iron Inc. on page 54: Series 1700 MEGALUG® Restraint Harness

ADD the following to the list of products/manufacturers on pages 54-56:

TYTON JOINT® Pipe is available from the manufacturer at the following address:

U.S. Pipe
P.O. Box 10406
Birmingham, AL 35202
(866)-347-7473

Bitumastic® 300 M is available from the manufacturer at the following address:

Carboline®
2150 Schuetz Rd.
St. Louis, MO 63146
(800)-848-4645

652.03.01 Sewer Pipe

E. Installing Sanitary Sewer and Force Mains.

ADD the following:

Coat all ductile iron force main joints with coal tar epoxy.

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704.03.01 General System (GS)

B. Installation.

7. ITS Conduits.

ADD the following:

- d. Directionally drill the conduit under the existing culvert located on Route 35 SB at approximate Station 2097+30.

The following are questions received from plan holders and the responses:

QUESTION # 1 from George Harms Construction Co., Inc. Concrete culvert & utilities - There appears to be an existing concrete culvert at Rt 35 Southbound, station 2097+25. The drawings show a new 12" appears the top of the culvert is the roadway surface, and there is no cover above the culvert. Please provide details of how these utilities are to cross over, through or around this culvert structure and modify the drawings accordingly.

□□ DIP

RESPONSE: The new water main is to tie in to the existing main on either side of the culvert. The new ITS conduits are to be directionally drilled under the culvert. Refer to PLAN CHANGES, PROPOSAL CHANGES, and SPECIFICATION CHANGES in this addendum.

QUESTION # 2 from George Harms Construction Co., Inc. Concrete pipe qty at Outfall Structure #29 - Drawing D-63 shows 20LF of 30" RCCP at outfall #29, but the structure details of Outfall #29 on drawing S-27 appear to show more than 20LF of pipe, based on the quantity of piles and supports to be installed. Please review this location and clarify how much 30" RCCP outfall pipe is needed west of the manhole structure.

RESPONSE: Refer to PLAN CHANGES and PROPOSAL CHANGES in this addendum.

QUESTION # 3 from Union Paving Construction Co., Inc. FRP Cap dimensions and payment - Regarding all outfalls with permanent sheetpiles and cap. 1. please provide dimensions of the cap for the sheetpiles 2. please provide connection details for this cap. 3. it appears the proposal quantities do not include the volume of the caps - please clarify that the caps will be measured and paid for under the FRP Lumber items. 4. please identify the location of the temporary sheeting at each outfall

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RESPONSE: Refer to PLAN CHANGES and PROPOSAL CHANGES in this addendum. Caps will be paid for under FIBERGLASS REINFORCED PLASTIC LUMBER. Temporary sheeting limits are shown on Plan Sheet S-32, Section A-A.

QUESTION # 4 from Diehl Electric, Inc. Existing Image Detectors - Can we get the manufacturer, make and model of the existing image detectors? This would allow us to quote the correct video detector cable.

RESPONSE: The manufacturer of the existing image detectors is unknown. As indicated in 702.03.13 of the Special Provisions, the Contractor is responsible for verifying the manufacturer before ordering the cable.

QUESTION # 5 from Union Paving Construction Co., Inc. Asbestos Pipe Removal - There is a large sum of sanitary and water pipe containing asbestos to be removed. However, not all existing runs are labeled such as on sheet UC53 and UC 54. How will the contractor be compensated for Asbestos Pipe Removal?

RESPONSE: Removal of pipe is paid for under CLEARING SITE. Known locations of sanitary ACP are labeled on the Plans. Based on records provided by NJAW, existing water pipe consists of the following:

1. Along the NB roadway, the water pipe is cast iron for the entire project limits
2. Along the SB roadway, the water pipe is ACP for the entire limits except for the section between approximate Station 2203+00 to 2217+00 which has recently been replaced with ductile iron.

QUESTION # 6 from George Harms Construction Co., Inc. MTD Type 7 and 8 - The MTD located at Rt 35 SB station 2066+50 is identified as a Type 8 on the plan view, but is tracked as a Type 7 in the To Be Constructed Box. The construction details also show this location as a Type 8 structure. Therefore the Bid Proposal quantity for the MTD Type 7 (Item #106) is 1 unit too high, and the Bid Proposal Quantity for MTD Type 8 (Item #107) is 1 too low.

RESPONSE: The MTD is a Type 8 as shown on the plan and detail. Refer to PLAN CHANGES and PROPOSAL CHANGES in this addendum.

QUESTION # 7 from Crisdel Group, Inc. MPT - Referring to drawing 390 (TC-5) Northbound Route 35 is constructed in a 1 block maximum work zone from 27+00 to 110+00. Northbound 35 from approximately 103+00 to 107+00 includes blocks at a length of 70 LF. Is the intent of

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the NJDOT to construct this section of road in 70 lf sections or will the department consider lifting the 1 block limit for this section of roadway?

RESPONSE: Yes, the 1 block limit can be lifted between Sta. 103+00 to 107+00.

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The following CHANGES are made to the Plans:

Plan Sheets 210 thru 214, 217, 219 thru 221, and 223 thru 246(UC-35 thru UC-39, UC-41, UC-43 thru UC-45, and UC-47 thru UC-70) are being reissued. Where available, invert and rim elevations for the existing sanitary sewer systems on the SB roadway have been added to these plans.

The following are questions received from plan holders and the responses:

QUESTION # 1 from Crisdel Group, Inc.:

Invert & Rim Data - The existing utility information shown on the utility plans provided in Add. 2 do not provide invert and rim data for the manholes located at various side streets.

Example- Page UC-56-West Beach Way-No data for existing sanitary manholes
Example- Page UC-57-West Colony Road-No Data for existing sanitary manholes
Example-Page UC-58-Normandy Way-No Data for existing sanitary manholes

The above list of examples is present throughout the additional plan pages. Please provide plan pages that include lines and text (invert & rim) data.

RESPONSE: Refer to PLAN CHANGES in this Addendum.

QUESTION # 2 from Alan Briteway Electric:

Electric Relocation JCP&L - When will the work be allowed to be scheveled or what restrictions can we expect now that the season has arrived, thank you

RESPONSE:Service interruptions are restricted in the summer months and must be coordinated with JCP&L (refer to Section 654 of the Special Provisions). The Contractor must also adhere to the lane closure restrictions identified on the Plans.

DRAWINGS ASSOCIATED WITH THESE ADDENDA ARE
NOT REPRINTED HERE DUE TO SIZE.

SPECIAL PROVISIONS

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PAVING, DRAINAGE & STRUCTURES
TOWNSHIPS OF TOMS RIVER & BRICK
BOROUGHES OF LAVALLETTE & MANTOLOKING
OCEAN COUNTY
FEDERAL PROJECT NO. ER-7044 (104)**

AUTHORIZATION OF CONTRACT

The Contract 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 2007 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 85 inclusive.

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Web Determinations online web site at <http://www.wdol.gov/dba.aspx#0>. Select state, county and construction type heading: HIGHWAY where the Project is to be performed then click Search.

Pay the prevailing wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the prevailing wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the prevailing wage rate prescribed for that craft by the New Jersey Department of Labor, pay the higher rate.

State wage rates may be obtained from the New Jersey Department of Labor & Workforce Development (Telephone: 609-292-2259) or by accessing the Department of Labor & Workforce Development's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html. The State wage rates in effect at the time of award are part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, et seq.).

If an employee of the Contractor or subcontractor has been paid a rate of wages less than the prevailing wage, the Department may suspend the Work, and declare the Contractor in default.

The following FHWA funded project Attachments that are located at the end of these Special Provisions:"

1. Required Contract Provisions, Federal-Aid Construction Contracts (Form FHWA-1273).
2. Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).
3. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246).
4. State of New Jersey Equal Employment Opportunity for Contracts Funded by FHWA.
5. Disadvantaged Business Enterprise Utilization Attachment, FHWA Funded Contracts
- 5(A) The Incentive Program, Disadvantaged Business Enterprise Utilization Attachment for FHWA Funded Contracts.

6. Equal Employment Opportunity Special Provisions.
7. Special Contract Provisions for Investigating, Reporting, and Resolving Employment Discrimination and Sexual Harassment Complaints.

DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – GENERAL INFORMATION

101.03 TERMS

THE FOLLOWING TERMS ARE CHANGED.

pavement structure. The combination of pavement, 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. **pavement.** One or more layers of specified material of designed thickness at the top of the pavement structure.
2. **base course.** One or more layers of specified material of designed thickness placed on the subgrade or subbase.
3. **subbase.** One or more layers of specified material of designed thickness placed on the subgrade.

Substantial Completion. When all work is complete, with the exception of HMA surface course, landscape items listed in 811.04, removal of SESC measures, FINAL CLEANUP, and repair of unacceptable work; provided the RE has determined that:

1. The Project is safe and convenient for use by the public.
2. Failure to complete work and repairs excepted above will not result in the deterioration of other completed work.

101.04 INQUIRIES REGARDING THE PROJECT

1. Before Award of Contract.

THE FIRST PARAGRAPH IS CHANGED TO:

Submit inquiries and/or view other questions/answers by following the format prescribed on the project's electronic bidding web page.

THE SECOND PARAGRAPH IS CHANGED TO:

The deadline for submitting inquiries is 12:00 noon, 7 days before the opening of bids.

2. After Award of Contract.

Central Region
Mr. Snehal Patel, Regional Construction Engineer
1035 Parkway Avenue
Trenton, NJ 08625
Telephone: 732-625-4207

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

102.02 BIDDER REGISTRATION AND DOWNLOADING OF THE PROPOSAL DOCUMENTS

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The Bidder shall not alter or in any way change the software.

102.03 REVISIONS BEFORE SUBMITTING A BID

THE SECOND PARAGRAPH IS CHANGED TO:

The Bidder shall acknowledge all addenda posted through the Department's website. The addenda acknowledgement folder is included in the Department's electronic bidding file. The Department has the right to reject the bid if the Bidder has not acknowledged all addenda posted.

102.04 EXAMINATION OF CONTRACT AND PROJECT LIMITS

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
PAVEMENT CORE RECORD**

Core Results for Route 35

Core No.	Direction	Lane	Milepost	AC Thickness (in.)	PCC Thickness (in.)	Compressive Strength (psi)	Base/Subbase Type
6	Northbound	Left Mainline	4.04	---	8 1/2	10,200	Gravel and Sand w/ Silt
7	Northbound	Left Mainline	5.18	---	8 1/4	10,400	Gravelly Fine Sand, Poorly Graded
8	Northbound	Left Mainline	6.40	---	8 1/4	7,970	Poorly Graded Sand w/ Silt & Gravel
15	Northbound	Left Mainline	7.68	---	8	14,000	Gravelly Fine Sand, Poorly Graded
16	Northbound	Left Mainline	9.11	---	8 1/4	11,800	Gravelly Fine Sand, Poorly Graded
9	Northbound	Left Shoulder	6.40	2 1/2	---	---	Gravelly Sand w/ Silt
11	Northbound	Left Shoulder	9.10	2 1/2	---	---	Poorly Graded Sand w/ Silt & Gravel
30	Northbound	Left Shoulder	4.03	2 3/4	---	---	Gravelly Fine Sand, Poorly Graded
1	Northbound	Right Mainline	7.01	---	8 3/4	11,900	Poorly Graded Sand w/ Silt & Gravel
2	Northbound	Right Mainline	8.35	---	8 3/4	7,170	Gravelly Fine Sand, Poorly Graded
5	Northbound	Right Mainline	6.73	---	8 1/2	11,100	Gravelly Sand
22	Northbound	Right Mainline	4.58	---	8 1/4	12,200	Gravelly Sand
10	Northbound	Right Shoulder	7.68	2 1/2	---	---	Poorly Graded Sand w/ Silt & Gravel
23	Northbound	Right Shoulder	5.18	2	---	---	Well Graded Gravel w/ Sand
29	Northbound	Right Shoulder	4.03	2 1/4	---	---	Gravelly Sand w/ Silt
17	Southbound	Left Mainline	7.68	7 1/2	---	---	Poorly Graded Sand w/ Silt & Gravel
18	Southbound	Left Mainline	5.20	7 3/4	---	---	Poorly Graded Sand w/ Silt & Gravel
19	Southbound	Left Mainline	4.01	7 3/4	---	---	Poorly Graded Sand w/ Silt & Gravel
12	Southbound	Left Shoulder	8.76	8	---	---	Well Graded Gravel w/ Sand
14	Southbound	Left Shoulder	7.68	5 1/4	---	---	Poorly Graded Sand w/ Silt & Gravel
20	Southbound	Left Shoulder	4.01	2 3/4	---	---	Gravelly Sand w/ Silt
26	Southbound	Left Shoulder	6.41	1 1/2	---	---	Poorly Graded Sand w/ Silt & Gravel
3	Southbound	Right Mainline	5.20	2	---	---	Poorly Graded Sand w/ Silt & Gravel

Core Results for Route 35

Core No.	Direction	Lane	Milepost	AC Thickness (in.)	PCC Thickness (in.)	Compressive Strength (psi)	Base/Subbase Type
4	Southbound	Right Mainline	8.76	8	---	---	Poorly Graded Sand w/ Silt & Gravel
13	Southbound	Right Shoulder	6.41	8	---	---	Poorly Graded Sand w/ Silt & Gravel
21	Southbound	Right Shoulder	8.75	3 1/4	---	---	Gravelly Sand w/ Silt
24	Southbound	Right Shoulder	4.01	2	---	---	Poorly Graded Sand w/ Silt & Gravel
25	Southbound	Right Shoulder	7.68	1 1/4	---	---	Well Graded Gravel w/ Sand
28	Southbound	Right Shoulder	6.41	2	---	---	Gravelly Sand w/ Silt
27	Southbound	Left Shoulder	5.21	2	---	---	Well Graded Gravel w/ Sand

The pavement information shown herein was used by the Department for design and estimate purposes.

102.10 SUBMISSION OF BIDS

THE FOLLOWING IS ADDED TO THE LIST INCLUDED IN THE SECOND PARAGRAPH:

8. On the Disclosure of Investment Activities in Iran (Form DC-16) provided by the Department, certify pursuant to N.J.S.A. 52:32-58, that neither the bidder, nor one of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of the Treasury's List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32-56(f). If the bidder is unable to so certify, the bidder shall provide a detailed and precise description of such activities to the Department.

SECTION 104 – SCOPE OF WORK

104.03.03 Types of Changes

3. Changes in the Character of Work.

a. Differing Site Condition.

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will make payment for increased costs resulting from a Type 1 or Type 2 Differing Site Condition as a change in the character of work; however, the Department will not consider making payment for a differing site condition unless the resulting change in cost exceeds \$7,500. Except, if the Contractor incurs cost as the result of multiple differing site conditions, with the cost of each separate differing site condition having a value of at least \$1,500 but not more than \$7,500, the Department will consider making payment for such costs if the aggregate cost of the multiple differing site conditions exceeds \$7,500. If the change in cost exceeds these amounts, the Department will base the modification on the total cost of the change, and the Department will not deduct the threshold amount of \$7,500 from the cost of the change.

104.03.04 Contractual Notice

THE SECOND PARAGRAPH IS CHANGED TO:

Immediately provide written notice to the RE of a circumstance that is believed to be a change to the Contract. If notice is not provided on Contractual Notice (Form DC-161), include the following in the initial written notice:

1. A statement that this is a notice of a change.
2. The date when the circumstances believed to be a change were discovered.
3. A detailed and specific statement describing the nature and circumstances of the change.
4. If the change will or could affect costs to the Department.
5. If the change will or could affect Contract Time as specified in 108.11.01.C.

In addition to the hard copy of the notice, email the notice to the RE. It is not necessary to attach listed documents to the email.

104.03.08 Force Account

7. Equipment.

a. Contractor-Owned Equipment.

PART 1 IS CHANGED TO:

- 1 The Department will calculate the “rental” hourly rates by dividing the monthly rate by 176. The Department will not use weekly, daily, or hourly rates. The Department will apply rental hourly rates for every hour the equipment is in active use, except that for any 30-day period, the Department will limit the total amount paid for each piece of equipment to a maximum of the monthly rate.

THE FOLLOWING PART IS ADDED:

6. The Department will make payment for costs for transporting equipment to and from the work site, if said costs are solely required as a direct result of the Force Account activity.

THE SECOND PARAGRAPH IS CHANGED TO:

The payment established is full payment for all equipment costs, including the cost of fuel, repairs, maintenance, depreciation, storage and incidentals.

10. Subcontractors.

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will make payment for markup on subcontracted work at the rate of 5 percent applied on the total amount of all costs for subcontracted force account work up to \$500,000 and 2% applied on the total amount of all costs for subcontracted force account work over \$500,000.

104.03.09 Delay Damages

1. Non-Productive Activity.

e. Equipment.

THE FIRST SENTENCE IS CHANGED TO:

If as the result of the delay, equipment cannot be used for any active work, and is directed by the RE to remain on the work site during the delay, the Department will make payment as specified in 104.03.08.7.a.5.

SECTION 105 – CONTROL OF WORK

105.05 WORKING DRAWINGS

THE SECOND PARAGRAPH IS CHANGED TO:

Ensure that working drawing submissions also conform to the Department design manuals and other Department standards for the proposed work. Ensure that working drawings are signed and sealed by a Professional Engineer. After Award, the Department will provide additional formatting information, the number of copies required, and the address of the receiving designated design unit.

105.07.01 Working in the Vicinity of Utilities

A. Initial Notice.

<i>Utility</i>	<i>Company/Agency</i>	<i>Contact</i>
Cable:	Cablevision 40 Pine Street Tinton Falls, NJ 07753	Paul Kostyz Phone: (732) 681-8222 Ext. 3285 Email: pkostyz@cablevision.com
Cable:	Comcast Communications Management, LLC 751 Brick Blvd. Brick, NJ 08723	Lawrence Fary Phone: (732) 380-7145 Lawrence_Fary2@cable.comcast.com
Electric:	JCP&L – First Energy Corp. 331 Newman Springs Rd., Bldg. 3 Red Bank, NJ 07701	Harvey Lockley Phone: (732) 212-4262 Email: hlockley@firstenergycorp.com
Electric:	Borough of Lavallette Dept. of Public Works PO Box 67 120 Washington Ave. Lavallette, NJ 08735	Gary Schlosser Phone: (732) 793-7766 Ext. 502
	O'Donnell Stanton & Associates, Inc. 1705 Route 37E Toms River, NJ 08753	Jack Berens Phone: (732) 573-0490 Email: osainc@verizon.net
Gas:	NJ Natural Gas 1415 Wyckoff Road PO Box 1464 Wall, NJ 07719	Dave Menaker Phone: (732) 919-8066 Email: dmenaker@njng.com
Telephone:	Verizon 10 Tansboro Rd. 2 nd Floor Berlin, NJ 08009-1907	Thomas Reber Phone: (856) 753-0795 Email: thomas.j.reber@verizon.com
Water:	NJ American Water Co. 100 James Street Lakewood, NJ 08701	Marty Walters III Phone: (732) 730-5814 Email: Martin.E.Walters@amwater.com

Water:	Borough of Lavallette Dept. of Public Works PO Box 67 120 Washington Ave. Lavallette, NJ 08735	Gary Schlosser Phone: (732) 793-7766 Ext. 502
	O'Donnell Stanton & Associates, Inc. 1705 Route 37E Toms River, NJ 08753	Jack Berens Phone: (732) 573-0490 Email: osainc@verizon.net
Sewer:	Brick Utilities 1557 Hwy. 88 West Brick, NJ 08723	Steve Specht Phone: (732) 458-7000 Ext. 247 Email: specht@brickmua.com
Sewer:	Toms River MUA 340 West Water Street Toms River, NJ 08257	Jim Lafferty Phone: (732) 240-3500 Ext. 113 Email: jlafferty@tomsrivermua.org
Sewer:	Borough of Lavallette Dept. of Public Works PO Box 67 120 Washington Ave. Lavallette, NJ 08735	Gary Schlosser Phone: (732) 793-7766 Ext. 502
	O'Donnell Stanton & Associates, Inc. 1705 Route 37 East Toms River, NJ 08753	Jack Berens Phone: (732) 573-0490 Email: osainc@verizon.net
Sewer:	Ocean County Utilities Authority 501 Hickory Lane PO Box P Bayville, NJ 08721	Keith Marcoon Phone: (732) 269-4500 Ext. 8218 Email: kmarcoon@ocua.com
		Michael Willis Phone: (732) 269-4500 Ext. 8268 Email: mwillis@ocua.com

B. Locating Existing Facilities.

2. Bureau of Traffic Operations, South Region (TOCS)
1 Executive Campus-Route 70 West
Cherry Hill, NJ 08002-4106
Telephone: 856-486-6650
3. Bureau of Electrical Maintenance, Central Region
100 Daniels Way
Freehold, NJ 07728-2668
Telephone: 732-625-4350

THE FOLLOWING IS ADDED:

Existing utilities shown on the Plans are based upon available records and limited subsurface utility engineering investigations. Prior to initiating any work, conduct a comprehensive subsurface utility investigation including markouts and test pits to record the horizontal and vertical locations of all underground utility infrastructure. The Department will make payment for test pits under EXCAVATION, TEST PIT. Based on the results of the utility investigation, evaluate all proposed utility alignments shown on the Plans for conflicts and develop recommended adjustments. Submit recommended adjustments to the RE for approval.

105.07.02 Work Performed by Utilities

Company Name & Address	Contact Person	Number of Day/s Advance Notice
Verizon	Thomas Reber	30
NJ Natural Gas	Dave Menaker	30
Cablevision	Paul Kostyz	14
Comcast Communications Management, LLC	Lawrence Fary	14
Jersey Central Power and Light	Harvey Lockley	30
Borough of Lavallette Department of Public Works	Jack Berens	7
Ocean County Utilities Authority	Michael Willis	7
Brick Utilities	Jim Allen	7
Toms River Municipal Utilities Authority	Jim Lafferty	7
New Jersey American Water Company	Martin Walters III	14

Stage # 1

Utility Company Name	Work Description	Work Duration (Day/s)	Restrictions
Verizon - Aerial	Install 71 new poles and transfer wires. Transfer wires to 63 new JCP&L poles.	100	None
Verizon – Underground	Reposition/ replacement of underground conduit at 8 locations. Reposition existing underground conduit at 16 locations.	48	None
NJ Natural Gas	Install 42 offsets of approximately 1,640 feet of 12” gas main and 55 offsets of approximately 3,350 feet of 6” gas main along the NB roadway. Install approximately 2,860 feet of 12” gas main along 4 side streets.	180	None
Cablevision	Transfer wires to 106 new poles set by others.	106	None
Comcast Communications Management, LLC	Transfer wires to 28 new poles set by others.	28	None

Stage # 1

Utility Company Name	Work Description	Work Duration (Day/s)	Restrictions
Borough of Lavallette Department of Public Works	Transfer wires to 16 new poles set by others.	32	None

Stage # 2

Utility Company Name	Work Description	Work Duration (Day/s)	Restrictions
Verizon	Reset 14 telephone manholes.	28	None

SECTION 106 – CONTROL OF MATERIAL

106.03 FOREIGN MATERIALS

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

For steel and iron products incorporated into the Project, provide a certification from the manufacturer stating the country where the steel or iron product was melted and manufactured including application of coatings which protect or enhance the value of the material. Ensure that 4 copies of the manufacturer’s certification are provided with each delivery of steel and iron products. Retain 1 copy and submit 3 copies to the RE. Ensure that the certification includes, materials description, quantity of material represented by the certification, country of manufacture, and notarized signature of a person having legal authority to bind the supplier. If a Certification of Compliance as specified in 106.07 contains a statement regarding the country of manufacture, a separate certification is not necessary.

SECTION 107 – LEGAL RELATIONS

107.01 LEGAL JURISDICTION

107.01.02 Permits, Licenses, and Approvals

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The Contractor is advised all water distribution improvements to New Jersey American Water Company owned facilities are authorized under their Water Main Master Permit as approved by the New Jersey Department of Environmental Protection (NJDEP). Do not perform water distribution improvements to the Borough of Lavallette owned facilities until NJDEP issues the Water Main Construction Permit. The anticipated date for issuance of this permit is June 30, 2013.

The Contractor is advised all sanitary sewer replacement work may be performed without the Treatment Works Approval Permit. Do not perform construction of new sanitary sewer facilities within Toms River Township and the Borough of Lavallette until NJDEP issues the Treatment Works Approval Permit. The anticipated date for issuance of this permit is May 31, 2013.

107.04 NEW JERSEY CONTRACTUAL LIABILITY ACT

THE FOURTH PARAGRAPH IS CHANGED TO:

For purposes of determining the date of “completion of the contract” pursuant to N.J.S.A. 59:13-5, “completion of the contract” occurs on the date that the Contractor provides written notice to the Department of Acceptance or conditional Acceptance of the Proposed Final Certificate or the 30th day after the Department issues the Proposed Final Certificate, whichever event occurs first.

107.09 INDEPENDENT CONTRACTOR

THE ENTIRE SUBSECTION IS CHANGED TO:

The relationship of the Contractor to the State is that of an independent contractor. Conduct business consistent with such status. Do not hold out or claim to be an officer or employee of the Department by reason hereof. Do not make a claim, demand, or application to or for the rights or privileges applicable to an officer or employee of the Department, including, but not limited to, Workers Compensation Insurance, unemployment insurance benefits, social security coverage, or retirement membership or credit.

107.12.01 Satisfying the Notice Requirements

THE FOLLOWING IS ADDED TO THE SECOND PARAGRAPH:

Upon request, provide the RE with 3 copies of all documentation submitted in support of the claim.

107.12.02 Steps

3. Step III, Claims Committee.

THE SECOND PARAGRAPH IS CHANGED TO:

The Claims Committee will not review a claim or combination of claims valued less than \$250,000 until after the receipt of conditional release as specified in 109.11. If the Contract is 75 percent complete or greater as measured by Contract Time or Total Adjusted Contract Price, the Claims Committee will not review a claim or combination of claims valued more than \$250,000 until after receipt of conditional release as specified in 109.11. If the Claims Committee does not review a claim or combination of claims before Completion, the Claims Committee will review the claim or combination of claims at a single session of the Claims Committee after the receipt of the conditional release as specified in 109.11 and all claims have been reviewed at Steps I and II of the Claims Resolution Process. When reviewing a combination of claims, the Claims Committee will not review any individual claim valued less than \$20,000.

THE FOLLOWING SUBSECTION IS ADDED

107.17 COMMUNICATION WITH THE NEWS MEDIA

Do not communicate with the news media or issue a news release without obtaining a prior written approval from the Department.

SECTION 108 – PROSECUTION AND COMPLETION

108.01 SUBCONTRACTING

1. Values and Quantities.

THE FOLLOWING IS ADDED TO FIRST PARAGRAPH

- 1. Specialty Items are as listed below:
 - Electrical wire items.

THE THIRD PARAGRAPH IS CHANGED TO:

If a partial quantity of work for a unit price Item is subcontracted, the Department will determine the value of the work subcontracted by multiplying the price of the Item by the quantity of units to be performed by the subcontractor.

THE FOURTH PARAGRAPH IS CHANGED TO:

If only a portion of work of an Item is subcontracted, the Department will determine the value of work subcontracted based on the value of the work subcontracted as indicated in the subcontract agreement and as shown in a breakdown of cost submitted by the Contractor.

108.02 COMMENCEMENT OF WORK

THE SUBPART 4 IN THE FIRST PARAGRAPH IS CHANGED TO:

- 4. Progress schedule as specified in 153.03

108.06 NIGHT OPERATIONS

2. Visibility Requirements for Workers and Equipment.

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that workers wear a 360° high-visibility retroreflective safety garment meeting ANSI/ISEA Class 3, Level 2 standards.

108.08 LANE OCCUPANCY CHARGES

THE SECOND PARAGRAPH IS CHANGED TO:

The RE will keep record of each occurrence as well as the cumulative amount of time that a lane is kept closed beyond the lane closure schedule and provide the record to the Contractor. The Department will calculate the lane occupancy charge by multiplying the length of time of the delayed opening, in minutes, by the rate of \$10 per minute per lane, unless otherwise specified in the Special Provisions. The total amount per day for the lane occupancy charge that the Department will collect will not exceed \$10,000.00.

108.10 CONTRACT TIME

- A. Complete all work required for Substantial Completion on or before December 1, 2014.
- B. Achieve Completion on or before May 15, 2015.

THE FOLLOWING IS ADDED:

The Contractor is advised that the Department has established a compressed schedule for this Contract. Extended work weeks, multiple crews and multiple daily work shifts may be required to meet the substantial completion date.

108.11.01 Extensions to Contract Time

B. Types of Delays.

1. Non-Excusable Delays.

THE FOLLOWING IS ADDED:

For work performed by Utilities, delays up to 30 percent of the estimated duration specified in 105.07.02 are considered non-excusable. The duration includes both the advance notice and the completion of the work by the Utility.

108.12 RIGHT-OF-WAY RESTRICTIONS

The Department has not obtained the following Right-of-Way parcels; the anticipated availability dates are provided:

Properties and Vacation/Availability Dates

Demolition and/ or Parcel No	Approximate Baseline Station	Offset/Direction	Date
E79	1720+80 SB	1460' / LT	October 1, 2013
TE80A	1720+80 SB	1480' / LT	October 1, 2013
TE80B	1720+80 SB	1500' / LT	October 1, 2013
TE80C	1777+00 SB	1520' / LT	October 1, 2013
TE80D	1777+00 SB	1530' / LT	October 1, 2013
TE80E	1986 +75 SB	1660' / LT	October 1, 2013
TE80F	1995+40 SB	1690' / LT	October 1, 2013

Demolition and/ or Parcel No	Approximate Baseline Station	Offset/Direction	Date
TE80G	2015+85 SB	990' / LT	October 1, 2013
TE80H	2015+85 SB	980' / LT	October 1, 2013
TE80I	2021+85 SB	960' / LT	October 1, 2013
TE80J	2021+85 SB	950' / LT	October 1, 2013
TE80K	2038+75 SB	570' / LT	October 1, 2013
TE80L	2038+75 SB	560' / LT	October 1, 2013
TE80M	2051+00 SB	100' / LT	October 1, 2013
TE80N	2054+00 SB	100' / LT	October 1, 2013
TE80O	2060+70 SB	70' / LT	October 1, 2013
TE80P	2065+70 SB	160' / LT	October 1, 2013
TE80Q	2081+80 SB	55' / LT	October 1, 2013
TE80R	2097+30 SB	40' / RT	October 1, 2013
TE80S	2097+30 SB	50' / RT	October 1, 2013
TE80T	2104+80 SB	40' / LT	October 1, 2013
TE80U	2108+80 SB	60' / LT	October 1, 2013
TE80V	2116+75 SB	95' / LT	October 1, 2013
TE80W	2125+00 SB	95' / LT	October 1, 2013
TE80X	2131+10 SB	85' / LT	October 1, 2013
TE80Y	2140+35 SB	195' / LT	October 1, 2013
TE80Z	2165+90 SB	90' / LT	October 1, 2013
TR80AA	2189+25 SB	180' / LT	October 1, 2013
TE80BB	2198+50 SB	90' / LT	October 1, 2013
TE80CC	2205+00 SB	50' / LT	October 1, 2013
TE80DD	2209+70 SB	40' / LT	October 1, 2013
E81A	2015+50 SB	900' / LT	October 1, 2013
E81B	2022+20 SB	800' / LT	October 1, 2013
E81C	2038+75 SB	490' / LT	October 1, 2013
E82	2054+00 SB	60' / LT	June 1, 2014
E83	2054+10 SB	60' / LT	June 1, 2014
E84	2060+64 SB	50' / LT	June 1, 2014
E85	2131+00 SB	80' / LT	June 1, 2014
E86	2131+30 SB	80' / LT	June 1, 2014
E87	2140+25 SB	205' / LT	June 1, 2014
E88	2165+80 SB	50' / LT	October 1, 2013
E89	2177+80 SB	50' / LT	June 1, 2014

108.14 DEFAULT AND TERMINATION OF CONTRACTOR'S RIGHT TO PROCEED

THE FOLLOWING IS ADDED AFTER THE 2ND PARAGRAPH:

If the Department directs the Surety to complete the Contract, and the Surety elects to use a completion-contractor to perform the Work, the Surety must promptly submit to the Department a request for approval of the proposed completion-contractor as a subcontractor as per Section 108.01. The Department has the right to reject a request by the Surety to use the Contractor as the completion-contractor, either directly or under the direction of a consultant to the Surety. In addition, the Department has the right to reject a request by the Surety to contract with employees of the

Contractor, directly or under the direction of a consultant to the Surety, to complete the Contract. The Department's right to reject contained in this paragraph is based on the sole discretion of the Department.

108.19 COMPLETION AND ACCEPTANCE

THE FOLLOWING IS ADDED:

No Incentive Payment for Early Completion is specified for this project.

108.20 LIQUIDATED DAMAGES

Liquidated damages are as follows:

- A. For each day that the Contractor fails to complete the work as specified in Subpart A of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Department will assess liquidated damages in the amount of \$13,500.
- B. For each day that the Contractor fails to achieve Completion as specified in Subpart B of Subsection 108.10 of these Special Provisions, the Department will assess liquidated damages in the amount of \$4,800.

THE FOLLOWING IS ADDED:

When the Contractor may be subjected to more than one rate of liquidated damages established in this Section, the Department will assess liquidated damages at the higher rate.

SECTION 109 – MEASUREMENT AND PAYMENT

109.01 MEASUREMENT OF QUANTITIES

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will designate Items as Measured Items or as Proposal Items by having a suffix of M or P in the Item number respectively. The Department will measure quantities of Measured Items for payment.

109.02 SCOPE OF PAYMENT

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The Department will not make additional or separate payment for work or portion of work unless specifically provided for in the "Measurement and Payment" Subsection.

109.05 ESTIMATES

THE SECOND PARAGRAPH IS CHANGED TO:

The RE will provide a summary of the Estimate to the Contractor. Before the issuance of each payment, certify, on forms provided by the Department, that:

1. Each subcontractor or supplier has been paid the amount due from the previous progress payment and shall be paid the amount due from the current progress payment and that full payment for any retainage withheld from a subcontractor has been or will be made within 30 days after the subcontractor's work has been satisfactorily completed; or
2. There exists a valid basis under the terms of the subcontractor's or supplier's contract to withhold payment from the subcontractor or supplier, and therefore payment is withheld.

THE TENTH PARAGRAPH IS CHANGED TO:

The RE has the right to not process an Estimate when, in the judgment of the RE, the Work is not performed or proceeding as specified in the Contract or following the Department giving the Contractor and Surety notice of default as specified in 108.14.

109.07 BONDS POSTED IN LIEU OF RETAINAGES

THE FIRST PARAGRAPH IS CHANGED TO:

The Contractor may deposit negotiable bonds of the State or any of its political subdivisions, which have been approved by the Department, in an escrow account to secure release of all or a portion of the retainage withheld as specified in [109.05](#). Establish the account under the provisions of an escrow agreement to be entered into between the Contractor, the Department, and a bank located in the State that is an authorized depository with a trust department. Pay the charges of the bank for services rendered according to the terms and conditions of the escrow agreement.

109.09 AUDITS

THE FOLLOWING IS ADDED:

Pursuant to N.J.S.A. 52:15C-14(d), relevant records of private vendors or other persons entering into contracts with the Department are subject to audit or review by the New Jersey Office of the State Comptroller. Therefore, the Contractor shall maintain all documentation related to products, transactions or services under the Contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

DIVISION 150 – CONTRACT REQUIREMENTS

SECTION 151 – PERFORMANCE BOND AND PAYMENT BOND

151.03.01 Performance Bond and Payment Bond

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Submit the broker's fees, the certified rate schedule, paid invoices and the report of execution for the bond to the RE.

151.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM'S PAY UNIT IS REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
PERFORMANCE BOND AND PAYMENT BOND	DOLLAR

SECTION 152 – INSURANCE

152.03.01 Owner's and Contractor's Protective Liability Insurance

A. Policy Requirements.

THE FOURTH SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that policies are underwritten by companies with a current A.M. Best rating of A- with a Financial Size Category of VII or better.

B. Types

1. Comprehensive General Liability Insurance.

THE FOLLOWING IS ADDED:

Ensure the policy names JCP&L, its officers, employees and agents as additional insured.

2. Comprehensive Automobile Liability Insurance.

THE FOLLOWING IS ADDED:

Ensure the policy names JCP&L, its officers, employees and agents as additional insured.

3. Owner's and Contractor's Protective Liability Insurance.

THE ENTIRE TEXT IS CHANGED TO:

Procure a separate Owner's and Contractor's Protective Liability Insurance Policy with a minimum limit of liability in the amount of \$4,000,000 per occurrence as a combined single limit for bodily injury and property damage. Ensure the policy is endorsed to include Severability of Interest/Separation of Insureds clause. Ensure the policy names the State, its officers, employees, and agents as additional insured. Provide documentation from the insurance company that indicates the cost of the Owner's and Contractor's Protective Liability Insurance Policy.

Ensure the policy is endorsed to include per project aggregate.

5. Excess Liability Insurance.

THE FOLLOWING IS ADDED:

Ensure the policy names JCP&L, its officers, employees and agents as additional insured.

6. Marine Liability Insurance.

THE ENTIRE TEXT IS CHANGED TO:

If construction operations require marine operations, procure Marine Liability Insurance with a minimum limit of liability in the amount of \$2,000,000 per occurrence. Ensure the policy is endorsed to include:

1. Personal injury.
2. Contractual liability.
3. Waiver of Subrogation for all claims and suits, including recovery of any applicable deductibles.
4. Per project aggregate.

Ensure the policy names the State, its officers, employees, and agents as additional insured.

152.03.03 Pollution Liability Insurance

SUBPART 9 IS ADDED TO THE THIRD PARAGRAPH:

9. Per project aggregate.

152.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS' PAY UNITS ARE REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE	DOLLAR
POLLUTION LIABILITY INSURANCE	DOLLAR

THE LAST PARAGRAPH IS CHANGED TO:

The Department will make initial payment for OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE, RAILROAD PROTECTIVE LIABILITY INSURANCE, and POLLUTION LIABILITY INSURANCE at the lesser of the bid amount, or actual costs as documented from paid invoices. If the Bid amount is greater than the amount indicated on the documented paid invoices, the Department will make payment for any remainder, up to the Bid amount, with the final monthly Estimate.

SECTION 153 – PROGRESS SCHEDULE

153.03.01 CPM PROGRESS SCHEDULE

THE THIRD PARAGRAPH IS CHANGED TO:

The Contractor may propose alternate staging. Ensure that proposed alternate staging does not interfere with work done by Others without written concurrence from the affected Others. The Department may reject the proposed alternate staging if it causes an increase to the cost of work done by Others. The Contractor is responsible for the cost of changes or additional work required as a result of completing the work according to the proposed alternate staging.

1. Preliminary Schedule Submission.

THE SECOND PARAGRAPH IS CHANGED TO:

The RE may require 3 color paper copies of the preliminary schedule, Gantt Chart, as specified in 153.03.02.2.e, and a network diagram (PERT) printed on 36 × 22-inch plans detailing the activity relationships.

2. Baseline Schedule Submission.

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The RE may require the Contractor to submit 3 color paper copies of the baseline schedule.

THE SECOND PARAGRAPH PART 3 IS CHANGED TO:

3. The RE may require 3 color paper copies of the tabular reports, as specified in 153.03.02.2, and a printed network diagram (PERT) on 36 × 22-inch sheets detailing the activity relationships.

153.03.02 CPM Progress Schedule Updates

THE LAST PARAGRAPH IS CHANGED TO:

If the project falls behind schedule for nonexcusable delays, so that the schedule indicates that the Work will not be completed by the Completion date, as specified in 108.10, take the necessary steps to improve progress. Under such circumstances, the RE may direct the Contractor to increase the number of shifts, begin overtime operations, work extra days including weekends and holidays, and supplement its construction plant. Furthermore, the RE may require the Contractor to submit for approval a recovery schedule showing how the Contractor proposes to meet the directed acceleration.

2. Tabular Reports.

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The RE may require 3 color paper copies of the longest path sort, total float sort, responsibility sort, area sort, and Gantt chart.

153.04 MEASUREMENT AND PAYMENT

THE THIRD PARAGRAPH IS CHANGED TO:

If the Contractor's CPM Progress Schedule update is not approved by the date of the progress meeting for the following update, the Department will assess liquidated damages to recover the Department's increased administrative costs. The Department will assess damages for each delinquent update as follows:

SECTION 155 – CONSTRUCTION FIELD OFFICE

155.03.01 Field Office

4. Communication Equipment.

- a. Telephones.** Provide 4 cordless phones with auto-switching.
- c. Cell Phones.** Provide 10 cellular phones. Ensure the cellular phone plan provides for unlimited mobile to mobile in-network usage, unlimited push-to-talk/ walkie-talkie usage and an anticipated monthly usage of 900 any-time minutes for each phone. Ensure the phones are on the same plan. Ensure the cellular phone plan has a home rate with no roaming charges within the state. Ensure each cellular phone has the following features:
 1. Push to Talk / Walkie-Talkie capable
 2. Camera with 1 megapixel picture capability
 3. Battery life capable of 180 minutes of continuous use and 72 hours of standby use
 4. Equipped with a hands-free headset
 5. Base charger and car charger
- d. Computer System.** Provide a computer system meeting the following requirements:
 - 5 computer configurations each meeting the following:
 1. Processor having a clock speed of 3.5 GHz or faster, 8 GB RAM, 512 MB Video RAM, 250 Gigabyte hard drive designated as drive C, one DVD (+/-) Writer Drive, one CD-R Recordable Drive. Ensure the system is USB 2.0 compatible and has at least two front USB ports Include Keyboard, optical mouse and 2 piece desktop speakers.
 2. Wired Router with appropriate number of ports and cables and a print server. Ensure there is at least one wired Ethernet switch.
 3. High-speed broad band connection and service with a minimum speed of 3 Megabits per second (mbps) with dynamic IP address for the duration of the project.
 4. 19 inch or larger Flat Screen LCD monitor with tilt/swivel capabilities.
 5. 250 Gigabyte or larger external drive with backup software for MS-Windows, and fifteen corresponding formatted data cartridges corresponding to the tape drive size.
 6. 1 Flatbed USB version 2.0 or greater Color Scanner with automatic document feed.

7. Uninterruptible power supply (UPS).
8. Surge protector for the entire computer configuration to be used in conjunction with the UPS.
9. Computer workstation, chair, printer stand, and/or table having both appropriate surface and chair height.
10. One can of compressed air and screen cleaning solution every other month of the duration of the contract.

If more than one computer configuration is specified, provide one network interface card for the base computer configuration and hardwire connections between computer configurations as directed by the RE.

Also provide:

8 USB 32 GB Flash/Jump memory drives

100 CD-R 700 MB (or larger) recordable CD's compatible with the CD drive and 100 recordable DVD's.

4 CD/DVD Holder (each holds 50)

1 color laser printers and supplies as follows:

1. Minimum of 192 Megabytes of expanded memory, printer cable, and legal size paper tray.
2. One set of printer ink cartridges every other month for the duration of the construction project for each printer.

Software as follows:

1. Microsoft Windows, latest version with future upgrades for the duration of the entire project.
2. Microsoft Office Professional, latest version.
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 contract.
5. Visio Professional Graphics Software for Windows, latest version
6. Primavera Project Management, latest version, on one computer
7. Adobe Acrobat Professional, latest version, or compatible software for Scanner

THE THIRD PARAGRAPH IS CHANGED TO:

When the computer system is no longer required by the RE, the Department will remove and destroy the hard drive, and return the computer system to the Contractor. The Department will retain other data storage media.

6. Office Equipment. Provide the following:

PART (1) IS CHANGED TO:

1. A copier with automatic document feed, 15 pages per minute copy speed, variable reduce/enlarge capability, and letter, legal, and ledger size capabilities. Erase the copier hard drive before removing the copier from the field office and provide the RE with a certification stating that the copier hard drive has been erased.

PARTS (2) AND (3) ARE CHANGED TO:

2. 1 digital camera(s). Ensure each digital camera has auto-focus, with rechargeable batteries and charger, 256 MB memory card, USB Memory Card Reader compatible with camera and field office computer, 1.5 inch LCD monitor, 5 mega pixel resolution, 10X optical zoom lens, built in flash, image stabilization, computer connections, and a carrying case
3. 1 video camcorder(s). Ensure each video camcorder is a mini DVD camcorder with 10X optical zoom, 2" LCD monitor, USB 2.0 compatible and includes USB 2.0 connections.

THE FOLLOWING IS ADDED::

7. 10 Mini DVD 2.8 GB (or larger) recordable DVD's compatible with the camcorder.

7. Inspection Equipment.

1. 5 Calculators with trigonometric capability
2. 2 Date/ Received stamps and ink pads
3. 2 Electronic Smart levels, 4 foot
4. 2 Electronic Smart levels, 2 foot
5. 10 Carpenter rulers
6. 2 Steel tapes, 100 feet
7. 2 Cloth tapes, 100 feet
8. 2 Illuminated measuring wheels
9. 1 Plumb bob and cord
10. 1 Line level and cord
11. 2 Surface thermometers
12. 2 Concrete thermometers
13. 2 Digital infrared asphalt thermometers
14. 2 Self-leveling laser levels with range of 100 feet and an accuracy of 1/4 inch per 100 feet
15. 10 Hard hats - orange, reflectorized hard hats according to ANSI Z89.1.
16. 10 Safety garments – orange, reflectorized, 360° high visibility safety garments according to ANSI/ISEA Class 3, Level 2 standards. To be replaced yearly for the duration of the contract.
17. 10 Sets of orange rain gear with reflective sheeting
18. 10 Sets of hearing protection with a NRR rating of 22 dB
19. 10 Sets of eye protection according to ANSI Z87.1
20. 1 Light meter - capable of measuring the level of luminance in foot-candles
21. 8 Lantern flashlights, 6V with monthly battery replacements
22. 1 Testing equipment and apparatus conforming to AASHTO T23, T119, T152
23. 10 Hard Bound Daily Diaries, 5-1/2" X 8" minimum with one day per page. To be provided yearly for the duration of the contract.
24. 500 Legal size hanging folders
25. 500 Legal size manila file folders – three tab

155.03.03 Telephone Service

THE CONTENT OF THIS SUBSECTION IS DELETED

155.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
TELEPHONE SERVICE	LUMP SUM

THE THIRD PARAGRAPH IS DELETED.

SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS

157.03.01 Construction Layout

THE FOLLOWING IS ADDED TO THE FIFTH PARAGRAPH:

The Contractor is advised that due to Superstorm Sandy the potential exists for field conditions to vary from Contract Plans and adjustments are anticipated to the layout of proposed facilities. Stakeout to verify existing field conditions and locations of new facilities prior to installation. Notify the RE of conflicts and submit sketches of actual field conditions.

THE SEVENTH PARAGRAPH IS CHANGED TO:

Provide the Utilities with the layout needed to install relocated utility facilities and coordinate the Work. Ensure that relocated facilities do not conflict with proposed construction, including High Voltage Proximity Act conflicts.

Proposed water and sanitary force main alignments shown on the plans are approximate and alignment adjustments are anticipated.

157.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM'S PAY UNIT IS REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
CONSTRUCTION LAYOUT	DOLLAR

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will adjust payment for CONSTRUCTION LAYOUT based on the final contract amount and will calculate as follows:

$$CL = \frac{CL_B \times (C_F - E_F)}{C_O - E_O}$$

Where:

CL = Adjusted payment for CONSTRUCTION LAYOUT.

CL_B = Bid price for CONSTRUCTION LAYOUT.

C_O = Original Contract Price.

C_F = Final Contract Price.

E_F = Total of CL_B and the final cost for PERFORMANCE BOND AND PAYMENT BOND, Incentive/Disincentives for completion/interim completion, and claim settlements.

E_O = Total of CL_B

E_O = Total of CL_B, and PERFORMANCE AND PAYMENT BOND.

SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL AND WATER QUALITY CONTROL

158.03.02 SESC Measures

8. Inlet Filters. Provide Type 1 and Type 2 inlet filters as follows:

a. Type 1.

THE ENTIRE TEXT IS CHANGED TO:

For a new inlet structure without a casting, mold welded steel wire fabric around the inlet walls. Extend the welded steel wire a minimum of 6 inches down each side of the structure. Secure geotextile to the welded wire fabric. Place No. 2 coarse aggregate against the inlet structure to hold the inlet filter in place.

For an inlet structure with a casting and exposed exterior walls, place geotextile under the casting and extend it a minimum of 6 inches below the top of the exposed walls. Place No. 2 coarse aggregate around the drain hole opening.

For an existing inlet structure without exposed exterior walls, place geotextile under the grate and extend the geotextile for a minimum of 6 inches beyond the grate.

For an inlet with a curb piece and without exposed exterior walls, ensure that the opening in the curb piece has a height of 2 inches. If the opening is greater than 2 inches, achieve the 2 inch opening size by

wrapping the geotextile around an appropriately sized piece of lumber. Place the lumber against the vertical opening.

19. Oil-Only Emergency Spill Kit.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Include Oil-only Emergency Spill Kit, Type 1 consisting of the following:

SECTION 159 – TRAFFIC CONTROL

159.03.02 Traffic Control Devices

6. Traffic Control Truck with Mounted Crash Cushions.

THE LAST SENTENCE IS CHANGED TO:

Submit drawings to the RE detailing the manner of securing the ballast, signed and sealed by a Professional Engineer, certifying that it is capable of withstanding the impact forces for which the impact attenuator is rated.

159.03.06 Temporary Traffic Stripes and Temporary Traffic Markings

THE ENTIRE TEXT IS CHANGED TO:

Apply temporary traffic stripes and markings when the ambient and surface temperatures are at least 45 °F and rising and the surface temperature is no more than 140 °F. Apply the traffic paint in a wet film thickness of 6 ± 1 mil. Apply glass beads to the wet paint in a uniform pattern and at the rate of 12 pounds per gallon of paint. Ensure TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN and TRAFFIC MARKINGS, THERMOPLASTIC are applied within 14 days of placing temporary traffic stripes and markings unless directed by the RE.

159.03.08 Traffic Direction

A. Flagger.

THE LAST SENTENCE IS CHANGED TO:

Ensure that the flagger is equipped with a STOP/SLOW paddle and follows MUTCD flagging procedures.

B. Police.

THE FOURTH PARAGRAPH IS DELETED.

159.04 MEASUREMENT AND PAYMENT

THE SECOND PARAGRAPH IS CHANGED TO:

For traffic control devices measured by the linear foot or unit basis that are specified in 159.03.02, the Department will make payment for the maximum quantity in service at one time as required by the Contract. For CONSTRUCTION SIGNS, the Department will make payment for the maximum quantity of specific sign types in service at one time as required by the Contract. If a particular sign type has more than one unique text, each sign with a unique text will be considered to be a specific sign type. The Department will make payment for 50 percent of the Contract bid price for traffic control devices specified in 159.03.02 that are measured on a linear foot, square foot or unit basis upon approved placement. The Department will prorate the balance of payment over the duration of the Contract.

The Department will make payment for TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN and TRAFFIC MARKINGS, THERMOPLASTIC as specified in 610.04.

SECTION 160 – PRICE ADJUSTMENTS

160.03.01 Fuel Price Adjustment

THROUGHOUT THIS SUBPART, TABLE 161.03.01-1 IS CHANGED TO TABLE 160.03.01-1

THE THIRD PARAGRAPH IS CHANGED TO:

If the as-built quantity of an Item listed in Table 160.03.01-1 differs from the sum of the quantities in the monthly Estimates, and the as-built quantity cannot be readily distributed among the months that the Item listed in Table 160.03.01-1 was constructed, then the Department will determine fuel price adjustment by distributing the difference in the same proportion as the Item's monthly Estimate quantity is to the total of the Item's monthly estimates.

THE 13 TH AND 15 TH LINE IN THE TABLE 160.03.01-1 IS CHANGED TO:

SOIL AGGREGATE BASE COURSE, ___ " THICK	1 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, ___ " THICK	1 Gallon per Cubic Yard

THE 25 TH LINE IN THE TABLE 160.03.01-1 IS CHANGED TO:

HOT MIX ASPHALT ___ ___ BASE COURSE	2.50 Gallons per Ton
-------------------------------------	----------------------

THE FOLLOWING ARE ADDED TO TABLE 160.03.01-1

Items	Fuel Usage Factor
NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
COLOR-COATED NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton

160.03.02 Asphalt Price Adjustment

NOTE 1 OF THE THIRD PARAGRAPH IS CHANGED TO:

- The Department will determine the weight of asphalt binder for price adjustment by multiplying the percentage of new asphalt binder in the approved job mix formula by the weight of the item containing asphalt binder. If a Hot Mix Asphalt item has a payment unit other than ton, the Department will apply an appropriate conversion factor to determine the number of tons used.

THE FOURTH PARAGRAPH IS CHANGED TO:

$$A = B \times [(MA - BA)/BA] \times C \times M \times G$$

Where:

- A = Asphalt Price Adjustment
- B = Bid Price for Tack Coat/Prime Coat
- MA = Monthly Asphalt Price Index
- BA = Basic Asphalt Price Index
- C = Petroleum Content of the Tack Coat and Prime Coat in Percent by Volume:
 - Use 100% for cutbacks and Tack Coat 64-22
 - 60% for Polymer Modified Tack Coat
 - 60% for RS or similar type emulsions
- M = Percentage of Bid Price Applicable to Materials Only: Use 82%
- G = Gallons of Tack Coat and Prime Coat Furnished and Applied

160.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS' PAY UNITS ARE REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
FUEL PRICE ADJUSTMENT	DOLLAR
ASPHALT PRICE ADJUSTMENT	DOLLAR

THE FOLLOWING SECTION IS ADDED:

SECTION 162 – VIBRATION MONITORING

162.01 DESCRIPTION

This Section describes the requirements for vibration monitoring.

162.02 CONSTRUCTION

162.02.01 Vibration Monitoring and Control

Perform vibration monitoring to measure the vibration levels of existing buildings and structures within 100' of any sheeting or pile installations.

A. Quality Assurance.

Perform all work under the direct supervision of a professional engineer registered in the State of New Jersey. The Engineer must have at least ten (10) years responsible experience in similar work and have available professional level capability in related geotechnical and structural evaluations and engineering.

Engage the services of a specialty firm experienced in measuring ground vibrations to conduct vibration monitoring and control during all sheeting and pile installations. The specialty firm shall have a minimum of five years experience performing similar work. Submit the specialty firm's qualifications to the RE for approval.

B. Vibration Monitoring and Control Program.

Contractor shall control ground vibrations caused by sheeting and pile installation activities so that existing buildings and structures are not impacted adversely. Implement the program prior to and during the course of sheeting and pile installation. Establish ambient vibrations at each structure within 100' of any activity. Any vibrations close to or exceeding the specified limits shall be immediately reported to the RE.

Provide two seismographs at each location where sheeting or piles are to be installed. Locate the two seismographs at each structure nearest the pile or sheeting installation activity as follows: one seismograph on the structure at a point nearest the pile/sheeting installation and one a distance of 10 to 15 feet from the first, as directed by the RE.

For each day of monitoring, prepare and submit a daily field report summarizing the results of the vibration monitoring to the RE by 9:00 a.m. of the following working day.

1. The Vibration Limit Criteria are as follows:

(a) Peak Particle Velocity Limits

Contractor shall conduct all activity in such a manner that the maximum peak particle velocity at existing structures does not exceed the safe limits recommended in the U.S. Bureau of Mines Report, RI 8507, Appendix B.

Submit a Vibration Monitoring and Control Plan at least 30 days before pile/sheeting installation activities. At a minimum, include the following information:

1. Techniques to maintain vibration levels below limits.
2. Mitigation techniques to be employed if required.
3. Proposed contents of report.

During pile or sheeting installation activities, vibrations shall be recorded continuously during work hours and evaluated full-time by the on-site vibration specialist during the first day of operations, and reviewed once daily thereafter.

Contractor shall cease operations and inform the RE if measurements are greater than limits. The RE will then perform an initial inspection of the portion of the structure adjacent to the Contractor's operations. If no indication of significant damage is found, i.e. noticeable deformation or observed cracking of structural members, the Contractor may resume construction activities while the RE simultaneously monitors and observes the structure to evaluate if it is sustaining damage or excessive deformation. If no significant damage or excessive deformation is observed during the initial operations, the Contractor may proceed with construction; however, the RE will perform daily inspections of the portions of the structures adjacent to the Contractor's work areas.

If it is determined that there is imminent or actual observed damage, pile or sheeting installation activities shall cease. The Contractor shall evaluate proposed modifications to his operations to mitigate damage and submit the proposed changes to the RE for review and acceptance before resuming operations.

162.03 MEASUREMENT AND PAYMENT

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
VIBRATION MONITORING	LUMP SUM

DIVISION 200 – EARTHWORK

SECTION 201 – CLEARING SITE

201.02 MATERIALS

THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS:

Controlled Low Strength Material (CLSM) 903.09

201.03 CONSTRUCTION

201.03.01 Clearing Site

THE FOLLOWING IS ADDED:

Remove fences, small-block retaining walls, and other incidental amenities that encroach within the NJDOT Right-Of-Way. At the direction of the RE, either dispose of material as specified in 201.03.09 or stockpile salvaged material for return to the property owner.

If impacted by construction operations, restore disturbed surfaces beyond the limit of work shown on the Plans using the existing on-site surface treatments. Carefully remove and stockpile this material as necessary to complete the work and reinstall to the satisfaction of the RE.

Dispose of material and debris as specified in 201.03.09.

Remove trees and branches within 15 feet of the end of JCP&L pole cross arms. If the resulting tree is rendered hazardous, then remove the entire tree according to SECTION 802.

E. Removing Pipe, Inlets, and Manholes.

THE FOLLOWING IS ADDED:

1. Asbestos-Cement Pipe (ACP).

Remove pipe sections in an “intact” condition where possible or, in a manner that prevents the material from being crumbled and the asbestos fibers becoming airborne (friable). Wet and containerize waste materials as work progresses. Ensure that work safety requirements, controls and practices are in compliance with OSHA’s Subpart Z, 29 CFR 1926.1101 – Asbestos. Load, transport, and dispose of the ACP according to Federal, State, and local laws, rules and regulations. Pay fees associated with removal and disposal of the ACP.

2. BASF (formerly Ciba-Geigy) abandoned pipeline.

The Contractor is advised that there is an existing 28-inch abandoned pipeline along the eastbound side of Second Avenue in the Township of Toms River. This pipeline is currently sealed but it is anticipated that the pipe is filled with liquid, such that opening the pipe will result in a discharge. When construction in the vicinity of the pipe will result in the removal of sections of the pipe, the following procedure shall be followed:

Establish a formal agreement with Toms River MUA & OCUA to obtain consent to discharge into the local Toms River system for treatment at the OCUA treatment facility. Obtain two (2) samples of the liquid within the pipe and conduct a priority pollutant scan to determine whether the dewatered liquid is acceptable to OCUA. If the liquid is acceptable to OCUA, wet tap the abandoned pipeline and pump the effluent into the nearest Toms River MUA sanitary sewer. Coordinate with Toms River to pay fees associated with removal and discharge of the effluent. Ensure no effluent is discharged to the trench. Should a discharge to the trench occur, the Contractor shall pay all resulting fines. Plug open ends of pipe as specified in 201.03.01.D.

If the liquid is determined not acceptable to the OCUA, the Department will make payment for removal of the liquid as specified in 109.03.

H. Filling Abandoned Pipes with CLSM

Submit proposed procedures for filling pipes to the Engineer for approval. Fill existing pipes indicated on the plans with CLSM for the full cross-sectional area of the pipe.

Do not place CLSM at temperatures below 50°F. Maintain the material temperature of the CLSM at a minimum of 50°F for no less than 24 hours.

Remove any temporary bulkheads, spillage and backfill and restore the area as needed.

201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will not make payment for the Item CLEARING SITE in excess of \$205,000 until Completion.

For each outfall location, the Department will not make payment for the Item CLEARING SITE, STRUCTURE (OUTFALL NO. __), in excess of the amounts shown below, until Completion:

CLEARING SITE, STRUCTURE (OUTFALL NO. 1A).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 1).....	\$20,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 2 AND 3).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 4A).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 5).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 6).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 7).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 8).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 9).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 10).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 13).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 17 AND 18).....	\$20,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 20 AND 21).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 23).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 24).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 25).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 26).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 27).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 28A).....	\$13,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 29).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 31A).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 33).....	\$10,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 34).....	\$14,000
CLEARING SITE, STRUCTURE (OUTFALL NO. 35A).....	\$10,000

SECTION 202 – EXCAVATION

202.02 MATERIALS

THE FIRST IN THE LIST IS CHANGED TO:

Coarse Aggregate (No. 57, or 67)..... 901.03

202.03.02 Excavating Test Pits

THE FOLLOWING IS ADDED:

Excavate test pits using the vacuum excavation method.

202.03.03 Excavating Unclassified Material

A. Excavating.

THE FIRST PARAGRAPH IS CHANGED TO:

The Department, as the generator, is solely responsible for the designation of excavated material. Unclassified excavation consists of excavation and management of material of whatever nature encountered, except for regulated material, concrete pavement removal and acid producing soil.

THE LAST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

Backfill unstable areas below the proposed pavement box with Coarse Aggregate, Size No. 57, wrapped in geotextile. Backfill unstable areas outside the limits of the pavement box with excavated material. Compact backfilled areas using the directed method as specified in 203.03.02.C.

202.03.04 Excavating Regulated Material

3. Temporarily Storing.

THE FIRST PARAGRAPH IS CHANGED TO:

Temporarily store regulated or hazardous material in stockpiles within the Project Limits and as shown on the Plans. Construct stockpiles on polyethylene sheeting. Contain stockpiles with haybales or silt fence placed continuously at the perimeter of the stockpiles. For hazardous material, if a stockpile area is not available within the Project Limits, sample and analyze materials in-situ for disposal. Excavate and place the hazardous regulated material directly into trucks, and haul it directly to the approved disposal facility.

202.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will make payment for removal of concrete pavement under REMOVAL OF PAVEMENT. The Department will make payment for removal of HMA pavement under EXCAVATION, UNCLASSIFIED.

When the RE directs undercutting of unstable material below the proposed pavement box, the Department will make payment for the excavation under EXCAVATION, UNCLASSIFIED and for the backfilling under COARSE AGGREGATE, SIZE NO. 57 and GEOTEXTILE, ROADWAY STABILIZATION.

SECTION 203 – EMBANKMENT

203.02.01 Materials

THIS SUBPART IS CHANGED TO:

Provide materials as specified:

Soil Aggregate (I-7, I-9, I-10, I-11, I-13, and I-14)..... 901.11

THE FOLLOWING IS ADDED:

Roadway Stabilization Geotextile 919.01

203.03.01 Constructing Embankment

THE FOURTH PARAGRAPH IS CHANGED TO:

Before placing embankment or any other unbound aggregate material, such as subbase or dense graded aggregate, on existing pavement, break the pavement into pieces that are a maximum of 12 inches in all dimensions.

203.03.02 Placing and Compacting Methods

C. Directed Method.

THE FOLLOWING IS ADDED:

Do not use dynamic compactors within a 25 foot radius of existing asbestos-cement pipe (ACP) that is not scheduled for removal.

Do not use dynamic compactors within a 25 foot radius of existing BASF (formerly Ciba-Geigy) abandoned pipeline that is not scheduled for removal.

203.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

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

DIVISION 300 – SUBBASE AND BASE COURSES

SECTION 302 – AGGREGATE BASE COURSE

302.02.01 Materials

THE FOLLOWING IS ADDED:

Coarse Aggregate (No. 57)..... 901.03

302.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

Item
COARSE AGGREGATE, SIZE NO. __

Pay Unit
CUBIC YARD

DIVISION 400 – PAVEMENTS

SECTION 401 – HOT MIX ASPHALT (HMA) COURSES

401.02.01 Materials

EMULSIFIED ASPHALT UNDER TACK COAT IS REVISED TO:

Emulsified Asphalt, Grade RS-1, CRS-1, SS-1, SS-1h, Grade CSS-1 or CSS-1h 902.01.03

401.02.02 Equipment

THE LAST PARAGRAPH IS CHANGED TO:

When an MTV is used, install a paver hopper insert with a minimum capacity of 14 tons in the hopper of the HMA paver.

401.03.02 Tack Coat and Prime Coat

TABLE 401.03.02-1 IS CHANGED TO:

Table 401.03.02-1 Tack Coat Application			
Material	Spraying Temp, °F	Gallons per Square Yard	Season
Cut-Back Asphalt:			
RC-70	120 to 190	0.05 to 0.15	Oct 15 to Apr 15
Emulsified Asphalt:			
RS-1	70 to 140	0.05 to 0.15	All year
CRS-1	125 to 185	0.05 to 0.15	All year
SS-1, SS-1h	70 to 140	0.05 to 0.15	All year
CSS-1, CSS-1h	70 to 140	0.05 to 0.15	All year

TABLE 401.03.02-2 IS CHANGED TO:

Table 401.03.02-2 Prime Coat Application			
Cut-Back Asphalt	Spraying Temp, °F	Gallons per Square Yard	Season
MC-30	85 to 150	0.1 to 0.5	Oct 15 to Apr 15
MC-70	120 to 190	0.1 to 0.5	Oct 15 to Apr 15
Emulsified Asphalt:			
CSS-1	70 to 140	0.1 to 0.50	All year

401.03.03 HMA Courses

A. Paving Plan.

THE FOLLOWING IS ADDED BEFORE THE FIRST SENTENCE OF THE FIRST PARAGRAPH:

The Contractor is advised of the flatness of roadway within the Project and positive drainage must be verified to ensure ponding locations are avoided. Verify final grades and notify the RE if grade adjustments are required.

THE FOLLOWING IS ADDED TO THE LIST:

- 15. Method of controlling and verifying positive drainage.

D. Transportation and Delivery of HMA.

THE FIRST PARAGRAPH IS CHANGED TO:

Deliver HMA using HMA trucks in sufficient quantities and at such intervals to allow continuous placement of the material. Do not allow trucks to leave the plant within 1 hour of sunset unless nighttime lighting is provided as

specified in 108.06. The RE will reject HMA if the HMA trucks do not meet the requirements specified in 1009.02. The RE will suspend construction operations if the Contractor fails to maintain a continuous paving operation. Before the truck leaves the plant, obtain a weigh ticket from a fully automatic scale. Before unloading, submit for each truckload a legible weigh ticket that includes the following:

1. Name and location of the HMA plant.
2. Project title.
3. Load time and date.
4. Truck number.
5. Mix designation.
6. Plant lot number.
7. Tare, gross, and net weight.

E. Spreading and Grading.

THE THIRD PARAGRAPH IS CHANGED TO:

Use an MTV for the construction of intermediate and surface course in the traveled way. Ensure that the MTV independently delivers HMA from the HMA trucks to the HMA paver. Operate the MTV to ensure that the axle loading does not damage structures, roadway, or other infrastructure.

1. Longitudinal Joints.

THE FOLLOWING IS ADDED:

Construct no more than 1 longitudinal joint per roadway direction on the final surface course.

H. Air Void Requirements.

THE FOLLOWING IS ADDED TO THE THIRD PARAGRAPH:

Inside shoulders less than 6 feet in width will not be included in other lots unless requested by the RE.

THE FOLLOWING IS ADDED AFTER THE THIRD PARAGRAPH:

If areas of existing shoulders are found to be insufficient to support the proposed HMA pavement and the required compaction cannot be achieved, notify the RE immediately. The RE may either direct additional milling and paving to provide a suitable base to pave the proposed HMA or waive coring and air void requirements in such shoulder areas.

J. Ride Quality Requirements.

THIS ENTIRE SUBPART IS CHANGED TO:

When the Project exceeds one mile in continuous length, the Department will evaluate the final riding surface using the International Roughness Index (IRI) according to ASTM E 1926. The final riding surface is defined as the last lift of the pavement structure where traffic will be allowed. The Department will use the measured IRI to compute the appropriate pay adjustment (PA). The PA will be positive for superior quality work or negative for inferior quality work.

The Department will calculate the PA as specified in Table 401.03.03-7 and will base PA on lots of 0.01 mile length for each lane, ramp, and shoulder and 0.005 mile for each overlaid bridge structure.

- 1 Smoothness Measurement.** The Department will test the longitudinal profile of the final riding surface for ride quality with a Class 1 Inertial Profiling System according to AASHTO M 328 and NJDOT R-1. If project conditions preclude the use of the Class 1 Inertial Profiling System, the Department will use a Class 1 walking profiler or lightweight profiler.

The IRI value reported for each lot is the average of 3 runs of each wheel path, unless otherwise directed by the Department.

- 2. Quality Control Testing.** Perform control testing during lift placement to ensure compliance with the ride quality requirements specified in Table 401.03.03-7
- 3. Preparation for IRI Testing.** Provide traffic control when the Department performs IRI testing. Perform mechanical sweeping of the surface before IRI testing. To facilitate auto triggering on laser profilers, place a single line of preformed traffic marking tape perpendicular to the roadway baseline 300 feet before the

beginning and after the end of each lane, shoulder, and ramp to be tested or at the direction of the Department. Submit the actual stationing for each traffic marking tape location to the RE.

4. Quality Acceptance. The Department will determine acceptance and provide PA based on the following:

- a. Pay Adjustment.** The pay equations in Table 401.03.03-7 express the PA in dollars per lot of 0.01 mile or 0.005 mile as shown in the table. The number of lots for final pay adjustment will be reduced by the number of lots excluded for each segment shown in Table 401.03.03-7. Lots excluded from final PA will be those with the highest recorded IRI numbers for respective roadway and bridge deck segments. IRI numbers are in inches per mile.

Table 401.03.03-7 Pay Equations for Ride Quality			
	Excluded Lots	Pay Equation(s)	
Route 35 NB from MP 4.00 to MP 7.70	Lane 1 – 1	PA on lots of 0.01 mile length	
	Lane 2 – 1	IRI < 45	PA = \$50
		$45 \leq \text{IRI} < 65$	$\text{PA} = \$162.50 - (\$2.50 \times \text{IRI})$
Route 35 SB from MP 4.00 to MP 7.70	Lane 1 – 3	$65 \leq \text{IRI} \leq 75$	PA = \$0
		$75 < \text{IRI} \leq 145$	$\text{PA} = (\text{IRI} - 75) \times (-\$7.1429)$
	Lane 2 – 3	IRI > 145	Remove & Replace
Route 35 NB from MP 7.70 to MP 9.08	Lane 1 – 1	PA on lots of 0.01 mile length	
	Lane 2 – 1	IRI < 35	PA = \$50
		$35 \leq \text{IRI} < 55$	$\text{PA} = \$137.5 - (\$2.50 \times \text{IRI})$
Route 35 SB from MP 7.70 to MP 9.08	Lane 1 – 2	$55 \leq \text{IRI} \leq 65$	PA = \$0
		$65 < \text{IRI} \leq 135$	$\text{PA} = (\text{IRI} - 65) \times (-\$7.1429)$
	Lane 2 – 2	IRI > 135	Remove & Replace
Route 35 Ramps and Shoulders	None	PA on lots of 0.01 mile length	
		IRI ≤ 120	PA = \$0
		$120 < \text{IRI} \leq 170$	$\text{PA} = (\text{IRI} - 120) \times (-\$10.00)$
		IRI > 170	Remove & Replace

- b. Removal and Replacement.** If the final IRI is greater than the Remove and Replace Value (RRV), remove and replace the lot. Replacement work is subject to the same requirements as the initial work.

If less than 8 percent of paving lots exceeds the RRV, submit a plan for corrective action. If the corrective action plan is not approved by the RE, remove and replace the designated lots. If the corrective action plan is approved and the lots are reworked, the lots are subject to the requirements of subpart 401.03.03.J Ride Quality Requirements except that the lots are not eligible for positive PA. The RE may allow the lots to remain in place and apply the pay adjustment as computed in Table 401.03.03-7.

401.03.04 Sawcutting and Sealing of Joints in HMA Overlays
THE TEXT OF THIS SUBPART IS DELETED.

THIS SUBPART IS INTENTIONALLY LEFT BLANK

401.03.05 Core Samples

THE LAST SENTENCE OF THE 2ND PARAGRAPH IS CHANGED TO THE FOLLOWING:

Apply an even coating of tack coat to sides of the hole. Place HMA in maximum lifts of 4 inches in the hole and compact each lift. Ensure that the final surface is 1/4 inch above the surrounding pavement surface.

401.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
SAWING AND SEALING JOINTS IN HOT MIX ASPHALT OVERLAY	LINEAR FOOT

THE FOLLOWING IS ADDED:

The Department will make a payment adjustment for HMA air void quality by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PPA}$$

Where:

BP = Bid Price

Q= Air Void Lot Quantity

PPA= air void PPA as specified in 401.03.03H.

The Department will make a payment adjustment for HMA thickness quality by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PPA}$$

Where:

BP = Bid Price

Q= Thickness Lot Quantity

PPA= thickness PPA as specified in 401.03.03I

The Department will make a payment adjustment for HMA ride quality, as specified in 401.03.03J.

DIVISION 500 – BRIDGES AND STRUCTURES

SECTION 501 – SHEETING AND COFFERDAMS

501.02 MATERIALS

THE FOLLOWING IS ADDED:

Fiberglass Sheeting916.05

501.04 MEASUREMENT AND PAYMENT

THE SECOND AND THIRD PAY ITEMS ARE CHANGED TO:

<i>Item</i>	<i>Pay Unit</i>
PERMANENT SHEETING (___)	SQUARE FOOT
TEMPORARY COFFERDAM (___)	LUMP SUM

SECTION 511 – BULKHEAD, FENDER, AND DOLPHIN SYSTEMS

511.02.01 Materials

14 TH ON THE LIST IS CHANGED TO:

Fiberglass Reinforced Plastic Lumber (FRPL)..... 916.01

THE FOLLOWING IS ADDED:

Fiberglass Pipe Pile 916.04
 Geotextile (Class I)..... 919.01

511.03.01 Bulkhead, Fender, and Dolphin Systems

A. Working Drawings.

2. Composite Piles.

DELETE THE FIRST THREE SENTENCES AND REPLACE WITH THE FOLLOWING:

2. Fiberglass Pipe Piles.

Include the following for Fiberglass Pipe Piles:

D. Constructing Bulkhead, Fender and Dolphin Systems

DELETE THE FIRST TWO PARAGRAPHS AND REPLACE WITH THE FOLLOWING:

Drive the fiberglass pipe piles as specified in 502.03.03B. Vibratory pile drivers for use in driving piles are only permitted at locations where shown on the plans. All other locations shall utilize impact hammers meeting the specifications shown on the plans. Ensure that the completed piling is vertical, in line, driven to the prescribed depth, cut off to a straight line at the shown elevation. Pile splices will not be permitted. Remove all soil within the pile to the tip elevation at piles that are to be filled with concrete. Fill piles where required with Class “A” concrete.

511.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
CONCRETE-FILLED FIBERGLASS PIPE PILE, FURNISHED (16” DIAMETER)	LINEAR FOOT
CONCRETE-FILLED FIBERGLASS PIPE PILE, DRIVEN (16” DIAMETER)	LINEAR FOOT
FIBERGLASS PIPE PILE, FURNISHED (12” DIAMETER)	LINEAR FOOT
FIBERGLASS PIPE PILE, DRIVEN (12” DIAMETER)	LINEAR FOOT

THE FOLLOWING IS ADDED:

The Department will measure the length of piles driven by total length of linear foot installed and accepted, from the tip to the cut off elevation.

The Department will not make separate payment for geotextiles and all hardware used in assembly of outfall structures including nuts, bolts, washers and tie rods. The Department will include payment for geotextiles and nuts, bolts, washers and tie rods under FIBERGLASS REINFORCED PLASTIC LUMBER.

The Department will make payment for FURNISHING EQUIPMENT FOR DRIVING PILES as specified in 502.04.

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

SECTION 601 – PIPE

601.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This Section also describes the requirements for constructing tide control check valves.

601.02 MATERIALS

THE FOLLOWING IS ADDED:

Tide Control Check Valves

In-Line Tide Control Check Valves: Shall be all elastomeric rubber and the flow operated check type with slip-in cuff connection. The entire inline valve shall be ply reinforced throughout the body, disc and bill, which is cured and vulcanized into one piece unibody construction. A separate valve body or pipe used as the housing is not acceptable. The valve shall be manufactured with no metal, mechanical hinges or fasteners, which would be used to secure any valve component to the valve housing. The port area of the disc shall contour into a circumferential sealing area concentric with the pipe, which shall allow passage of flow in one direction while preventing reverse flow. The entire valve shall fit within the pipe inside diameter. Once installed, the valve shall not protrude beyond the face of the structure or end of the pipe, the valve shall be furnished with a set of stainless steel expansion clamps. The clamps, which will secure the valve in place, shall be installed in the upstream or downstream cuff of the valve, depending on installation orientation, and shall expand outwards by means of a turnbuckle. Each band shall be pre-drilled allowing for the valve to be pinned and secured into position in accordance with the manufacturer's installation instructions.

Company name, plant location, valve size patent number, and serial number shall be bonded to the check valve.

Manufacturer shall comply with the following quality assurance requirements:

- Supplier shall have at least ten (10) years experience in the design and manufacture of similar style elastomeric check valves.
- Manufacturer shall have designed, fabricated and have at least one current installation of a similar style elastomeric check valve in the 60" (1500mm) size. Manufacturer must provide documentation, including project name, location, photographs of the installed valve, video of the valve in operation, and references.
- Manufacturer shall have conducted independent hydraulic testing to determine headloss on a minimum of eight sizes of all rubber unibody inline valves ranging from 2" through 48".
- Manufacturer shall have conducted an independent hydraulic test where multiple valves (at least four) of the same size were tested to validate the submitted headloss characteristics and to prove the repeatability of the manufacturing process to produce the same hydraulic characteristics.

Slip-On Tide Control Check Valves: Shall be "Duckbill" elastomeric rubber Check Valves of the flow operated check type with a slip-on connection. The Check Valve is to be designed to slip over the specified pipe outside diameter and attached by means of vendor furnished stainless steel clamps. The port area shall contour down to a duckbill, which shall allow passage of flow in one direction while preventing reverse flow. The valve shall be one piece rubber construction with nylon reinforcement. The duckbill shall be offset so that the bottom line of the valve is flat, keeping the invert of the pipe parallel with the invert of the valve. The top of the valve shall rise to form the duckbill shape. The bill portion shall be thinner and more flexible than the valve body and formed into a curve of 120°.

Company name, plant location, valve size, and serial number shall be bonded to the check valve.

Manufacturer shall comply with the following quality assurance requirements:

- Supplier shall have at least ten (10) years experience in the manufacture of "duckbill" style elastomeric valves.
- Manufacturer shall have conducted independent hydraulic testing to determine headloss and jet velocity characteristics on a minimum of eight sizes of duckbill valves ranging from 2" through 48". The testing must include multiple constructions (stiffness) within each size and must have been conducted for free discharge (discharge to atmosphere) and submerged conditions.
- Manufacturer shall have conducted an independent hydraulic test where multiple valves (at least four) of the same size and construction (stiffness) were tested to validate the submitted headloss characteristics and to prove the repeatability of the manufacturing process to produce the same hydraulic characteristics.
- Manufacturer to have conducted Finite Element Analysis (FEA) on various duckbill valves to determine deflection, stress and strain characteristics under various load conditions. Modeling must have been done for flowing conditions (positive differential pressure) and reverse differential pressure.
- Valves 24" and larger must incorporate a metallic support completely encapsulated in the wall thickness at the top portion of the valve to assist in supporting the weight of the valve.
- The bill slit of the duckbill valve must be at least 1.57 times the nominal pipe diameter.

601.03 CONSTRUCTION

601.03.01 Installing Pipe

E. Joining Pipe.

THE FIRST PARAGRAPH IS CHANGED TO:

Join rigid pipe using rubber gaskets to form a watertight seal. Do not use mortar joints.

THE SECOND AND THIRD PARAGRAPHS ARE DELETED IN THEIR ENTIRETY.

F. Backfilling.

THE FOLLOWING IS ADDED TO THE LAST PARAGRAPH:

Where proper compaction between parallel drainage pipes cannot be achieved, use CLSM.

THE FOLLOWING SUBPART IS ADDED:

601.03.07 Tide Control Check Valve

Install valves in accordance with manufacturer's written Installation and Operation Manual.

Submit all requested manufacturer assurance information and shop drawing details of the proposed Tide Check Valves for review and approval.

Manufacturer's authorized representative shall be available for customer service during installation and start-up, and to train personnel in the operation, maintenance and troubleshooting of the valve.

601.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEMS ARE ADDED:

<i>Pay Item</i>	<i>Pay Unit</i>
___" TIDE CONTROL CHECK VALVE, IN-LINE	UNIT
___" TIDE CONTROL CHECK VALVE, SLIP-ON	UNIT
CONCRETE ENCASEMENT	CUBIC YARD

THE FOLLOWING IS ADDED:

The Department will make payment for restoring the pavement structure for trenches in the traveled way and shoulder under various Items of the Contract.

The Department will not make separate payment for piping associated with the temporary diversion of storm water through the work zones.

SECTION 602 – DRAINAGE STRUCTURES

602.02.01 Materials

THE FOLLOWING IS ADDED:

Steel plate cover for drainage structures:

Provide 2 inch thick steel plates according to ASTM A572, GR 50 and hot dip galvanized according to ASTM A123.

Provide metal stiffener rings for manhole openings in the steel plate according to ASTM A572, GR 50 and hot dip galvanized according to ASTM A123 after stiffener ring is welded to plate.

Manufactured Treatment Devices (MTD):

Use one of the following stormwater treatment systems, or approved equal:

Vortechs™ as manufactured by
CONTECH Engineered Solutions
605 Global Way Suite 113
Linthicum MD 21090
Phone (410) 796-5505

Downstream Defender™ as manufactured by
Hydro International
94 Hutchins Drive
Portland, ME 04102
Phone (207) 756-6200

Aqua-Swirl (Polymer Coated Steel) as manufactured by
AquaShield, Inc
Shri Agencies LLC
3 Stockton Drive
Ringoos, NJ 08551
Phone 908-284-5041

Use model numbers or sizes as specified below for the selected manufacturer and MTD type:

*MTD Type	Water Quality Flow Rate (cfs)	Vortechs	Downstream Defender™ (DIA.)	Aqua Swirl
1	1.12	2000	4'	AS-4
2	1.75	3000	6'	AS-5
3	2.50	4000	6'	AS-6
4	3.40	5000	8'	AS-7
5	4.50	7000	8'	AS-7
6	5.70	9000	10'	AS-8
7	7.00	11000	10'	AS-9

8	10.10	16000	12'	AS-10
9	11.83	PC 1319	1 – 10' & 1-8'	AS-12
10	13.72	PC 1421	1 – 12' & 1-6'	AS-13
11	15.75	PC 1522	1 – 12' & 1-10'	TWIN AS-10

* As noted within the Contract Plans.

Submit shop drawings and details of the proposed non-standard and modified drainage structures for review and approval prior to fabrication.

602.03 CONSTRUCTION

602.03.02 Inlets and Manholes

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

Install a two (2) feet sump below lowest pipe invert of all inlets and manholes.

THE FOLLOWING IS ADDED:

In locations where 16 inches of cover over proposed drainage pipe at drainage structures (manhole or inlet) is not provided, install a steel plate cover, with metal stiffener ring, in lieu of the drainage structure concrete top slab.

THE FOLLOWING SUBPART IS ADDED:

602.03.09 Manufactured Treatment Devices

Perform a “Z” pattern test pits at the proposed MTD locations prior to installation of any pipes to verify and confirm the location of existing utilities and to insure MTD can be located where designed. If conflicts arise, contact RE immediately to assess impact and make revisions, where necessary, to plans.

Submit shop drawings of the MTDs, diversion structure and downstream reconnection structure, including a plan view depicting the layout of the structures and piping in relation to each other.

Perform a “Z” pattern test pits at the proposed MTD locations prior to installation of any pipes to insure MTD can be located where designed. If conflicts arise, contact RE immediately to assess impact and make revisions, where necessary, to work prints.

Excavate as specified in 202.03.03. Obtain RE approval before finishing excavating. If the RE determines that the bottom of excavation is unstable, undercut, backfill, and compact as directed by the RE.

Construct manufactured treatment devices in accordance with the manufacturer’s requirements. Construct cast-in-place weir walls as specified in 504.03.02.

MTD manufacturer’s authorized representative shall be available for customer service during installation and start-up, and to train personnel in the operation, maintenance and troubleshooting of the device. A maintenance manual shall be provided for future reference.

602.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEMS ARE ADDED:

<i>Pay Item</i>	<i>Pay Unit</i>
INLET, NON-STANDARD	UNIT
MANHOLE (___)	UNIT
MANUFACTURED TREATMENT DEVICE (___)	UNIT

THE FOLLOWING IS ADDED:

The Department will make payment for temporarily setting new inlets and manholes to existing grade for traffic control under the various Items for new inlets and manholes.

SECTION 606 – SIDEWALKS, DRIVEWAYS, AND ISLANDS

606.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This Section also describes the requirements for constructing stone or gravel driveways, imprinted crosswalks and resetting existing concrete pavers.

606.02.01 Materials

THE FOLLOWING IS ADDED:

Stone or Gravel Driveway

Use stone or gravel conforming to 901.03 that closely matches the material of existing driveway.

Reset Precast Concrete Pavers

Use commercial-grade crushed stone for leveling course.

Use either commercial-grade crushed stone dust or masonry sand for joints.

Filter Fabric: Use subsurface drainage geotextile as specified in 919.01

Imprinted Crosswalk

Use a hot applied wearing surface that is a mixture of thermoplastic resins, polymer, rubber, aggregates, glass fibers, pigments and/or fillers that produce a product with superior adhesion, flexibility and abrasion resistance characteristics as well as color stability, chemical resistance and scrub ability. Ensure that it is capable of being produced in the specified color and pattern, and it has been developed specifically for use on asphalt and concrete pavement. The below list of companies can produce the required material:

1. TrafficPrint by Traffic Calming USA, 266 South Main Street, Suite 800, Dallas, Georgia, 30132, 770-505-4044, www.trafficcalmingusa.com
2. Imprint by Dynamic Surface Applications Ltd., 373 Village Road, Pennsdale, PA 17756, 800-491-5663, www.dsa-ltd.com
3. Techprint by CrafcO, Inc., 420 N. Roosevelt Ave., Chandler, AZ 85226, 800-528-8242, www.crafcO.com

Provide material selected from available standard colors to most closely match the darkest red in Anchor Concrete Products’ Liberty Blend pavers (Anchor Concrete Products, 800-682-5625, www.anchorcp.com). Provide the brick imprint mold in a running bond pattern.

Ensure that the imprinted crosswalk material meets the requirements in Table 606.02.01-1.

Table 606.02.01-1 Imprinted Crosswalk Material Properties		
Property	Test Method	Requirement
Water Absorption, maximum	ASTM D 570	0.5%
Softening Point, minimum	ASTM D 36	200°F
Bond Strength, minimum	ASTM D 4796	300 psi
Impact Resistance, minimum	ASTM D 256, Method A	10 in-lbs
Flash Point, minimum	ASTM D 92	440°F
Skid Resistance, minimum	ASTM E 303	55
Low Temperature Stress Resistance	AASHTO T 250	No cracks

Ensure that pigment used for imprinted crosswalk is well dispersed in the resin. Ensure that the pigment, or any other materials in the imprinted crosswalk, does not contain lead, lead chromate or hexavalent chromium. Ensure that the imprinted crosswalk material, upon heating to application temperature, does not exude fumes that are toxic or injurious to persons or property.

As cover aggregate for the imprinted crosswalk, use only manufactured stone sand that conforms to 901.05.02 except that not more than 5 percent passing No. 200 sieve is permitted.

606.03 CONSTRUCTION

606.03.02 Concrete Sidewalks, Driveways, and Islands

H. Protection and Curing.

THE LAST SENTENCE IS CHANGED TO:

Ensure vehicles and other loads are not placed on sidewalks, islands, and driveways until the concrete has attained compressive strength of 3000 pounds per square inch, as determined from 2 concrete cylinders field cured according to AASHTO T 23.

THE FOLLOWING SUBPARTS ARE ADDED:

606.03.04 Imprinted Crosswalk

Ensure that the installation of the imprinted crosswalk is performed by a manufacturer-qualified applicator that has a minimum of five years experience with asphalt pavement texturing.

Submit product data in accordance to the RE with the Materials Questionnaire. Submit samples showing color, texture, and pattern to the RE for approval by the Office of Landscape Architecture.

Prepare the HMA pavement area that is to receive the imprint resin material. Sawcut as needed and mill the HMA surface course to the depth specified by the manufacturer. Remove all dirt, debris, salts, concrete admixtures, and any chemical residues. Ensure the hot applied resin is not installed when precipitation is expected or temperatures are below 32 °F.

Prepare the imprinted crosswalk for installation utilizing a heating kettle specifically designed for hot applied mixed resin. Ensure the material is heated to within a temperature range of 385 °F to 420 °F. Uniformly distribute the hot applied resin material onto the pavement surface by means of preheated finishing irons that are used to smooth and level the material. Immediately apply dry sand over the hot applied resin to cover the surface at an approximate rate of 1.75 lb/sf. Immediately after applying the sand, stamp the pattern into the semi-molten resin material using an approved stamp capable of providing a 5/16 inch ±1/16 inch deep impression. Ensure the stamp has a brick pattern.

Allow the hot applied resin to cure for a minimum of 1 hour until the material has hardened and remove all excess sand from the surface.

606.03.05 Stone or Gravel Driveway

Submit stone samples for each driveway to the RE for approval. Place stone in a manner so that the look of the finished driveway is similar to the existing driveway.

606.03.06 Reset Precast Concrete Pavers

Use caution in removing the existing pavers and edge restraints. Remove foreign or extraneous matter from the pavers. Store the pavers at a location that is safe from damage.

Place filter fabric on shaped and compacted subgrade. Place leveling course, ¾" (minimum) to 1" (maximum), on top of filter fabric. Place pavers so they tightly abut each other and in the same pattern as the existing pavers. Set exposed edges of pavers on a plastic angle edge restraint. Fill joints with stone dust or masonry sand and compact with a plate compactor. After compacting, flush area with water and confirm that all joints have been filled.

606.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

<i>Pay Item</i>	<i>Pay Unit</i>
IMPRINTED CROSSWALK	SQUARE YARD
STONE OR GRAVEL DRIVEWAY, 4" THICK	SQUARE YARD
RESET PRECAST CONCRETE PAVERS	SQUARE YARD

SECTION 607 – CURB

607.03.02 Concrete Vertical Curb and Concrete Sloping Curb

D. Placing Concrete.

THE ENTIRE TEXT IS CHANGED TO:

Place concrete for vertical curb and sloping curb as specified in 607.03.01.D, except that consolidation may be achieved by hand spading or internal mechanical vibrators.

607.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

<i>Pay Item</i>	<i>Pay Unit</i>
CONCRETE CURB (TYPE 1)	LINEAR FOOT

SECTION 608 – NON-VEGETATIVE SURFACES

608.01 DESCRIPTION

THE ENTIRE TEXT IS CHANGED TO:

This Section describes the requirements for constructing non-vegetative surfaces of HMA and Porous Resin Bound Aggregate.

608.02.01 Materials

THE FOLLOWING IS ADDED:

Provide materials for porous resin bound aggregate as specified:

Aggregate shall be 3/8" nominal Quartzose Aggregate from a local quarry. Color of aggregate shall be a natural local blend of south New Jersey quartzose and obtained from one quarry. NJDOT Office of Landscape Architecture will provide the contractor with a color sample to match and will approve of the final color.

Epoxy shall be a high-strength elastomeric binder as specified in FILTERPAVE porous pavement system, Gravel-Lok Porous Stone Paving, or approved equal.

Geotextile, Paving Fabric 919.01

608.02.02 Equipment

THE FOLLOWING IS ADDED:

Provide equipment for porous resin bound aggregate as specified:

Small-Batch Mixer 1010.04

608.03 CONSTRUCTION

THE FOLLOWING SUBPART IS ADDED:

608.03.03 Porous Resin Bound Aggregate

Excavate as specified in 202.03.03. Obtain RE approval before finishing excavation. If the RE determines that the bottom of excavation is unstable, undercut, backfill, and compact as directed by the RE.

Set forms as specified in 405.03.02D1 in areas where sidewalk is not being placed as interior edge.

Place geotextile fabric on prepared base.

Ensure that the work is supervised by a person who has 5 years previous experience with placement of material. At least 5 references must be given prior to work performed.

Prepare clear high-strength UV stable elastomeric epoxy as per manufacturer’s directions. Completely coat clean washed dry aggregate with epoxy at ratio required by manufacturer in small batches. Spread mixture over prepared surface. Shape and compact the mixture making sure that there are no loose stones. Level and trowel to finish.

Allow 24 hours to cure. Protect area for the duration of the curing period. Post warning tape around poured area during the curing period. Do not cover with plastic.

Remove forms after the 24 hour curing period has occurred.

608.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
NON-VEGETATIVE SURFACE, POROUS RESIN BOUND AGGREGATE, 2” THICK	SQUARE YARD

SECTION 609 – BEAM GUIDE RAIL

609.03.01 Beam Guide Rail

THE SEVENTH PARAGRAPH IS CHANGED TO:

Install flexible delineators with white retroreflective sheeting on the right side of the direction of traffic. Install flexible delineators with yellow retroreflective sheeting on the left side of the direction of traffic. Mount flexible delineators on the blockout of beam guide rail using either a “U” channel base on the I-beam blockout or a flat base attached to a wood, polymer, or other solid top blockout. Attach the base to the blockout using an adhesive recommended by the manufacturer of the base and panel.

SECTION 610 – TRAFFIC STRIPES, TRAFFIC MARKINGS, AND RUMBLE STRIPS

610.03.04 Removal of RPMs

THE ENTIRE TEXT IS CHANGED TO:

Remove RPMs as directed by the RE. Dispose of RPMs as specified in 201.03.09. If directed by the RE, fill the hole with HMA patch as specified in 159.03.07 except sawcutting is not required.

610.03.06 Ground Mounted Flexible Delineators

THE FIRST PARAGRAPH IS CHANGED TO:

Use white retroreflective sheeting for delineators located on the right side when facing in the direction of traffic. Use yellow retroreflective sheeting for delineators located on the left side when facing in the direction of traffic.

610.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
RPM, BI-DIRECTIONAL, WHITE LENS	UNIT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
TRAFFIC MARKINGS, LINES, LONG LIFE, THERMOPLASTIC	LINEAR FOOT

THE FOLLOWING IS ADDED:

The Department will measure TRAFFIC MARKINGS, LINES, LONG LIFE, THERMOPLASTIC by the linear foot for each 4 inch width of line.

SECTION 612 – SIGNS

612.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This Section also describes the requirements for the furnishing and installation of routed HDPE (high density polyethylene) municipal welcome signs. Components include the signs, mounting posts, and footings.

612.02 MATERIALS

THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS:

- Sign: Layered white/green/white HDPE (high density polyethylene) sheet, 3/4" thick
- Posts: .60 pcf KDAT pressure treated lumber, 4" X 6" nominal
- Cross Pieces: .40 pcf KDAT pressure treated lumber, 2" X 4" nominal
- Stain: Solid white exterior stain
- Wood Preservative: Copper naphthenate or oxine copper
- Footing: Provide excavation according to Section 202
Provide Class B concrete for footing, as specified under Subsection 903.03
- Hardware: Self tapping 2" deck screws, AISI Type 316 18/8 stainless steel
Self-tapping 4" #12 wood screws, AISI Type 316 18/8 stainless steel

612.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

Erect the sign posts per the locations on the contract plans. Ensure that the footing is a minimum of 4 feet deep and 18 inches in diameter. Provide 6" of concrete below each post and ensure that each post is plumb. Field drill breakaway holes completely through posts as shown on the construction details and treat with wood preservative. Keep lumber dry until it has been stained. Stain posts and cross pieces with solid white stain. Pre-drill holes and attach cross pieces to the back of the sign as shown on the construction details. Mount the sign on the sign posts. Pre-drill holes for screws 3/4" in from edge of post as shown on the construction details and secure sign to posts with wood screws. Maintain a height of four feet above ground level to the bottom of the sign.

Repair or replace any sign or post damage, to the satisfaction of the RE at no additional cost to the State.

612.04 MEASUREMENT AND PAYMENT
THE FOLLOWING ITEMS ARE ADDED:

Item

OVERHEAD STREET NAME SIGNS
CUSTOM SIGN

Pay Unit

SQUARE FOOT
SQUARE FOOT

DIVISION 650 – UTILITIES

SECTION 651 – WATER

651.02 MATERIALS

THE FOLLOWING IS ADDED:

Provide Class 52 ductile iron water pipe.

For all water companies, the acceptable pipe suppliers are:

1. United States Pipe & Foundry Co.
1101 East Pearl Street
Burlington, NJ 08016
2. Griffin Pipe Products Company
1100 West Front Street
Florence, NJ 08518
3. McWane Cast Iron Pipe Co.
P. O. Box 607
Birmingham, AL 35201
4. American Cast Iron Pipe Company
2916 16h Street North
Birmingham, AL 35207

Provide fittings for ductile iron water pipe.

Fitting suppliers acceptable are:

1. (Sigma through) United States Pipe & Foundry Co.
1101 East Pearl Street
Burlington, NJ 08016
2. (Tyler Union –domestic only)
McWane Cast Iron Pipe Co.
P. O. Box 607
Birmingham, AL 35201
3. American Cast Iron Pipe Company
2916 16h Street North
Birmingham, AL 35207

For NJAW facilities, provide gate valves for all valves less than 12 inches in size and butterfly valves for all valves 12 inches or greater in size. For Borough of Lavallette facilities, provide gate valves for all valves, regardless of size.

Acceptable gate valve suppliers are:

1. Mueller Company
500 W. Eldorado St.
Decatur, IL 62522
2. Clow Canada
1757 Burlington Str. East
P.O. Box 2849

Hamilton, Ontario L8N 3R5

3. M&H Valve
P.O. Box 2088
Anniston, AL 36202
4. United States Pipe & Foundry Co.
1101 East Pearl Street
Burlington, NJ 08016
5. AMERICAN Flow Control
P.O. Box 2727
Birmingham, AL 35202-2727

Acceptable butterfly valve suppliers are:

1. Henry Pratt Company, Subsidiary of Mueller Co.
401 S. Highland Ave.
Aurora, IL 60506
2. DeZurik
250 Riverside Avenue North
Sartell, MN 56377

Provide cast iron valves boxes for valves. Use valve boxes with bases conforming to the following:

<u>Valve Size</u>	<u>Base</u>
4" and smaller	round, 8" in height, 10-7/8" diameter at bottom
6" and 8"	round, 11" in height, 14-3/8" diameter at bottom
10" and larger	oval, 11" in height, 15" x 11-1/8" diameter at bottom

Acceptable valve box suppliers are:

1. Bingham & Taylor
P.O. Box 939
Culpeper, VA 22701
(540)-825-8334
2. Mueller Company
500 W. Eldorado St.
Decatur, IL 62522
3. Handley Industries, Inc.
2101 Brooklyn Rd.
Jackson, MI 49203
(800)-870-5088
4. A.Y. McDonald Mfg. Co.
P.O. Box 508
Dubuque, IA 52004-0508
(563)-583-7311

5. Clay & Bailey Mfg. Co.
6401 E. 40th St.
Kansas City, MO 64129
(816)-924-3900

Provide mechanical joint restraints. Use Meg-A-Lug® by EBAA Iron, Inc.

Provide gaskets. Use Field Lok 350® Gasket by U.S. Pipe.

Provide steel rods, bolts, lugs and brackets, according to ASTM A36 or A307 carbon steel with xylan coating as a minimum requirement. Ensure the bolts have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in ANSI B18.2. Use Xylan® or FluoroKote #1® T-Bolts, corrosion resistant to handle corrosive conditions on any buried flanged bolts.

Provide petrolatum wax tape coating to steel surfaces according to AWWA Standard C217. Use Tapecoat® Envirotape or Denso Densyl Tape.

Subject to approval by the RE, provide an aerosol applied rubberized coating as an alternative corrosion protection for exposed buried metal. Ensure the material is rapid dry and specifically designed for corrosion protection. Use 3M™ Underseal Rubberized Undercoating-08883 or any equivalent rubberized-bitumen based spray-on undercoating. Follow manufacturer's recommendations for storage.

Provide ductile iron retaining glands coated with electrostatically applied baked-on polyurethane coating or approved equal. Use retaining glands by EBAA Iron, Inc.

Water Service Connections:

Provide Type 'K' copper tubing for 3/4 inch through 2 inch water service pipe.

Provide meter tiles for meter chambers for NJAW. Use MS2030B by HD Supply Waterworks.

Provide meter setters for NJAW. Use #37-410WXCC-44 by A.Y. McDonald Mfg. Co.

Provide meter box frames and covers for NJAW. Use 32-115-RMR-215 and 32-111RMRCL 215 by Vestal Manufacturing Enterprises, Inc.

Provide corporation and curb stops for the Borough of Lavallette. Use Mueller Corporation Valves for copper service and Mueller Oriseal® Curb Valves by Mueller Company.

Provide extension type house service curb boxes for the Borough of Lavallette. Use Ford Arch Pattern Curb Box with Lid and Stationary Rod by The Ford Meter Box Co., Inc. or approved equal.

Retaining glands and Meg-A-Lug® are available from the manufacturer at the following address:

EBAA Iron Inc.
P.O. Box 857
Eastland, TX 76448
(800)-433-1716

Ford Arch Pattern Curb Box is available from the manufacturer at the following address:

The Ford Meter Box Co., Inc.
775 Manchester Avenue
P.O. Box 443
Wabash, IN 46992-0443
(260)-563-3171

Field Lok 350® Gasket is available from the manufacturer at the following address:

U.S. Pipe
P.O. Box 10406
Birmingham, AL 35202
(866)-347-7473

Meter tiles are available from the manufacturer at the following address:

ROUTE 35 RESTORATION
CONTRACT NO. 004950321

HD Supply Waterworks
61 Gross Avenue
Edison, NJ 08837
(732)-225-1039

Meter setters are available from the manufacturer at the following address:

A. Y. McDonald Mfg. Co.
P.O. Box 508
Dubuque, IA 52004-508
(800)-292-2737

Meter box frames and covers are available from the manufacturer at the following address:

Vestal Manufacturing Enterprises, Inc.
P.O. Box 420
Sweetwater, TN 37874
(423)-337-6125

All materials are subject to approval by the respective utility owner.

NJAW will provide marker balls.

NJAW and the Borough of Lavallette will provide replacement fire hydrant parts, if required.

651.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

Do not perform water distribution improvements to the Borough of Lavallette owned facilities until NJDEP issues the Permit for Water Main Construction , as specified in 107.01.02. Obtain a copy of the approved permit prior to commencing work on their facilities. Construct water distribution improvements to New Jersey American Water Company owned facilities, as specified in 107.01.02.

Prior to initiating work, conduct utility investigations as specified in 105.07.01B. To avoid conflicts with proposed infrastructure (drainage pipe, inlets, MTDs utilities, ITS facilities, traffic signals, etc.) and existing facilities to remain, the Contractor may utilize varying pipe depth installation (3' minimum and variable), use of fittings, and pipe joint deflection (within the recommended tolerances of pipe manufacturer requirements). Submit recommended adjustments to the water main alignment to the RE for approval.

Only a prequalified subcontractor, approved by New Jersey American Water Co. (NJAW), may construct and relocate NJAW facilities. The following is a list of subcontractors that have been previously approved by NJAW. This list is provided as information only, and is not an endorsement by the Department of any subcontractor. The Contractor is responsible for soliciting from a subcontractor that will be approved by NJAW when preparing its Bid. Work restricted to the water subcontractor does not preclude the Contractor from performing the work of layout, traffic control, sawcutting, pavement removal, temporary or final pavement restoration, and landscape restoration associated with the work of installing or relocating NJAW facilities.

APPROVED NJAW CONTRACTORS

Alward, H.W.
J. Bardzik
161 Mt. Airy Rd
Bernardsville, NJ 07924
908.766.0063

CMW Contractors
P. Scott Handel
420 W 1st Ave.
Roselle, NJ 07203
908-241-8810

Creamer, J.F.
D. Creamer
101 East Broadway
Hackensack, NJ 07601
201.488.9862

CRJ Contracting
J. Ciacciarelli
P.O. Box 5387
Branchburg, NJ 08876

Dewcon, Inc.
F. Dewey
P.O. Box 439
Basking Ridge, NJ 07920

Henkels & McCoy Inc
M. Anders
512 Elbow Lane
Burlington, NJ 08016

908-259-1300

Hisko Excavating
J. Hisko Sr.
5 Commerce St.
Somerville, NJ 08876
908-782-8556

Montana Construction
Dominic Santaite
80 Contant Ave.
Lodi, NJ 07644
973-478-5200

R.C.W. Contracting, Inc
R. Peterson
2228 Turk Road
Doylestown, PA 18901
267-880-3617

Schilke Contracting Co
D. Schilke
301 Valley Rd
Somerville, NJ 08876
908.369.8495

Waters & Bugbee, Inc
S. Minshall
75 South Gold Drive
Hamilton, NJ 08691
609-584-1100

908-832-5710

J.F. Kiely Construction Co.
R. Sexton
700 McClellan St.
Long Branch, NJ 07740
732-222-4400

Northeast/Remsco
Rolando Acosta
1433 Highway 34 South, B-1
Farmingdale, NJ 07727
732-557-6100

Renda, Ernest Const. Co
A. Renda
51 Tannery Rd
Somerville, NJ 08876
908.534.4116

Spinello Companies
E.J. Solimine
12 East Daniel Road
Fairfield, NJ 07004
973-808-8383

609.387.9000

Liedl & Co
D. Liedl
3322 Rt 22 West, Suite 415
Branchburg, NJ 08876
908-510-6876

Pioneer Pipe Contractors, Inc.
H. Covely Jr.
P.O. Box 358
Pitman, NJ 08071
856-582-5522

Sambol Construction Co.
G. Matthews
P.O. Box 5110
Toms River, NJ 08753
732-349-2900

Vollers Excavating
G. Jannerone
3311 US Hwy #22
North Branch, NJ 08876
908.725.1026

651.03.01 Water Pipe

A. Scheduling of Work and Interruption to Water Service.

THE FOLLOWING IS ADDED:

Prior to initiating water main construction, submit a detailed sequencing plan of the anticipated work including service cut-overs. Ensure that the sequencing plan addresses the Contractor's proposed stage construction limits and all work to be completed within those limits. Provide all materials and appurtenances, including tapping sleeves and valves (wet taps), insertion/isolation valves, fittings, etc., to perform water main tie-ins and staged construction of the water facilities. Construct temporary water service connections as specified in 651.03.03. Ensure main shut-downs and service cut-overs are performed in accordance with the requirements and restrictions of the respective water utility owner (NJAW and Borough of Lavallette).

E. Installing Water Pipe.

THE FOURTH SENTENCE OF THE FIFTH PARAGRAPH IS CHANGED TO:

Install gate valves, butterfly valves, inserting valves, tapping sleeves, tapping valves, valve boxes, blow-offs, and miscellaneous fittings. Install push on joint pipe through straight runs of pipe. Install mechanical joints and restraints at fittings and valves. Install gaskets at every three (3) pipe lengths before and after mechanical joint restraint. Install marker balls above all fittings at a maximum of 5 feet below grade.

THE FOLLOWING IS ADDED TO THE FIFTH PARAGRAPH:

Apply hot coat of asphaltic compound to both inside and outside of cast iron valve boxes. Ensure valve box is supported so that no load can be transmitted from the valve box to the valve. Install a self-centering alignment ring at the operating nut or ensure bottom of the box is centered over the operating nut and runs perpendicular to the horizontal. After field installation, apply petrolatum wax tape coating to all steel surfaces. Prepare surface and install tape according to ASTM C217 and the manufacturer's recommendations. If RE approves alternative corrosion protection for exposed buried metal, apply aerosol rubberized coating according to manufacturer's recommendations.

I. Thrust Blocks.

THE FIRST SENTENCE IS CHANGED TO:

Install thrust blocks in addition to joint restraint at fire hydrant assemblies and at plugs or caps as shown in Plans.

651.03.03 Water Service Connection

THE FOLLOWING IS ADDED AFTER THE SIXTH SENTENCE:

Install corporation stops, curb stops, and curb boxes for the Borough of Lavallette service connections. Replace existing corporation stops, curb stops, and curb boxes with meter pits for NJAW. Install meter setter, meter tile, meter box frame and cover.

651.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
__" VALVES AND BOXES	UNIT

THE FOLLOWING IS ADDED:

The Department will make payment for pipe encasements under CONCRETE ENCASEMENT.

SECTION 652 – SANITARY SEWERS

652.02 MATERIALS

THE FOLLOWING IS ADDED:

Force Mains:

Provide ductile iron sewer pipe conforming to ANSI A21.51 and thickness Class 52. Furnish necessary rubber gaskets. Use mechanical joint type fittings conforming to ANSI A21.10 and pressure ratings of 250 psi.

Provide restrained joint polyvinyl chloride pipe with cast iron outside diameters for force mains. Use CertainTeed Certa-Lok™ C900/RJ™ PVC pipe for 12-inch force mains. Use Big Blue™ DR 18 by JM Eagle™ for 14-inch and 20-inch force mains. Use green pipe for all force main applications.

Provide injection molded fittings for force main pipe. Use Blue Brute® Fittings, DR 18 or greater, by IPEX, Inc. for 12-inch force mains. Use IPEX Centurion™ Fittings, DR 18 or greater, by IPEX, Inc. for 14-inch and 20-inch force mains.

Provide restraint harnesses for force main pipe and fittings. Use Series 2500 by EBAA Iron Inc. for all joints of force mains.

Provide restrained coupling systems for force main joining existing ductile iron pipe. Use Series 3800 Coupling by EBAA Iron Inc. for 12-inch force mains. Use Series 1700 Coupling by EBAA Iron Inc. for 14-inch and 20-inch force mains.

Gravity Mains:

Provide PVC pipe, with bell and spigot ends, and fittings according to ASTM D 3034 SDR 35 for gravity sewers.

Provide transition couplings for the Borough of Lavallette. Use Fernco® couplings by Fernco® or approved equal.

Provide transition couplings for Brick Utilities and TRMUA. Use 501 Ductile Iron Coupling by Romac Industries, Inc. or approved equal.

Manholes:

Provide flexible manhole boots at manhole and pipe connections for connections to reconstructed manholes for TRMUA, Borough of Lavallette, and Brick Utilities. Use NPC Kor-N-Seal® Pipe-to-Manhole Connectors by Trelleborg Pipe Seals Milford, Inc. or approved equal

Provide flexible seals at manhole and pipe connections for new manholes for TRMUA and Borough of Lavallette. Use A-LOK® full compression seals by A-LOK® Products, Inc. or approved equal.

Provide watertight flexible connector between OCUA pipes and reconstructed manholes. Use PSX: Positive Seal by Press-Seal Gasket Corporation.

Provide underlayment and protective polymer lining on concrete benches for OCUA reconstructed manholes. Use Underlayment No. F-120 and Sewergard™ – Rotary Spray No. 210RS by Sauereisen.

Provide fiberglass grating for OCUA reconstructed manholes. Use Fibergrate® Molded Grating by Fibergrate Composite Structures, Inc.

Provide precast concrete sections for manholes with a minimum compressive strength of 4000 psi.

Provide gaskets at manhole joints for TRMUA and Borough of Lavallette. Use Butyl-Lok Sealants by A-LOK® Products, Inc. or D-Lok Rubber Gasket by Atlantic Concrete Products, Inc. or approved equal.

Provide coal tar epoxy waterproofing coating for the exterior of manholes.

Provide heat shrinkable membrane for joint sections of manholes for Brick Utilities. Use WrapidSeal™ by Canusa-CPS.

Provide interior PVC manhole liner in manholes for Brick Utilities, Borough of Lavallette, and TRMUA. Use Dura Plate 100 Liner System by A-Lok® Products, Inc. or approved equal.

Provide manhole steps for Borough of Lavallette and Brick Utilities. Use manhole steps by M.A. Industries, Inc. or approved equal.

Provide 6061-T6 aluminum alloy ladder for Brick Utilities with side rails 2-1/2 inches by 3/8-inch aluminum bar stock and steps 1-1/4 inches wide flat aluminum bars. Use mounting angles 9 inches × 4 inches × 1/2-inch × 2 inches long aluminum angles and 1/2 inch anchors.

Provide drop bowl for inside drop connections in manholes for Brick Utilities. Use Part #A6DB by Reliner®/Duran Inc. or approved equal.

Except where noted on the Plans, provide manhole frames and covers for Ocean County Utilities Authority (OCUA). Use Pattern Number 1203B or 1203A by Campbell Foundry Company as determined.

Provide manhole frames and covers for Toms River Municipal Utilities Authority (TRMUA). Use Pattern Number 1202B by Campbell Foundry Company or approved equal. Ensure the letters “DSA” are cast integrally in the cover and the pick holes are watertight.

Provide manhole frames and covers for Brick Utilities. Use Pattern Number 1202B by Campbell Foundry Company or approved equal. Ensure the letters “B.T.M.U.A.” are cast integrally in the cover and the pick holes are watertight.

Provide manhole frames and covers for the Borough of Lavallette. Use Pattern Number 1203B “Flow-Seal®” or 1203A “Flow-Seal®”, as determined, by Campbell Foundry Company or approved equal. Ensure the letters “Lavallette Sanitary Sewer” are cast integrally in the cover and the pick holes are watertight.

Sanitary Connections:

Provide concrete forms for deep house connections for Brick Utilities. Use Sonotube® Round Concrete Forms by Sonoco®.

Provide PVC cleanouts and laterals with a minimum of Schedule 40 wall thickness with solvent weld joints, according to ASTM F 656 and F 545.

Provide fittings in cleanouts according to ASTM D 2564.

Provide cleanout frames and covers for Brick Utilities. Use Pattern Number 4155 or 4173 by Campbell Foundry Company as determined.

Provide cleanout frames and covers for TRMUA and Borough of Lavallette. Use CC4 or CC6 by The General Engineering Company (Geneco) as determined.

Casings:

Provide steel casing pipe meeting the basic materials and dimensions in accordance with ASTM A252, Grade 1 for Schedule 40 pipe. Galvanize the pipe according to ASTM A123.

Provide polyethylene casing spacers and insulators for Brick Utilities, Borough of Lavallette, and TRMUA. Use Model CI by Advance Products & Systems, Inc. or approved equal.

Provide molded casing end seals for Brick Utilities, Borough of Lavallette, and TRMUA. Use Model AM by Advance Products & Systems, Inc. or approved equal.

Provide 2-inch thick high density Styrofoam insulation board for TRMUA.

CertainTeed Certa-Lok™ C900/RJ™ is available from the manufacturer at the following address:

CertainTeed Corporation
P.O. Box 860
Valley Forge, PA 19482
(800)-233-8900

Big Blue™ DR 18 is available from the manufacturer at the following address:

JM Eagle™
Regional Sales Office
Nine Peach Tree Road
Livingston, NJ 07039

Blue Brute® Fittings and IPEX Centurion™ Fittings are available from the manufacturer at the following address:

IPEX USA LLC
10100 Rodney Street
Pineville, NC 28134
(704)-889-2431

Series 2500 Restraint, Series 3800 Coupling and Series 1700 Coupling are available from the manufacturer at the following address:

EBAA Iron Inc.
P.O. Box 857
Eastland, TX 76448
(800)-433-1716

Pattern numbers 1203B, 1203B “Flow-Seal®”, 1203A, 1203A “Flow-Seal®”, 1202B, 4155, and 4173 are available from the manufacturer at the following address:

Campbell Foundry Company
800 Bergen Street
Harrison, NJ 07029
(973)-483-5480

Underlayment No. F-120 and Sewergard™ – Rotary Spray No. 210RS are available from the manufacturer at the following address:

Sauereisen
160 Gamma Drive
Pittsburgh, PA 15238
(412)-963-0303

Fibergrate® Molded Grating is available from the manufacturer at the following address:

Fibergrate Composite Structures, Inc.
5151 Beltline Road
Suite 1212
Dallas, TX 75254-7028
(800)-527-4043

PSX: Positive Seal is available from the manufacturer at the following address:

Press-Seal Gasket Corporation
2424 West State Boulevard
P.O. Box 10482
Ft. Wayne, IN 46852
(800)-348-7325

CC4 and CC6 are available from the manufacturer at the following address:

The General Engineering Company (Geneco)
P.O. Box 609
Frederick, MD 21705-0609
(800)-345-6454

Model CI and Model AM are available from the manufacturer at the following address:

Advance Products & Systems, Inc.
P.O. Box 60399
Lafayette, LA 70596-0399
(337)-233-6116

Fernco® couplings are available from the manufacturer at the following address:

Fernco®, Inc.
300 S. Dayton St.
Davison, MI 48423
(810)-653-9626

501 Ductile Iron Coupling is available from the manufacturer at the following address:

Romac Industries, Inc.
21919 20th Avenue SE
Bothell, WA 98021
(800)-426-9341

WrapidSeal™ is available from the manufacturer at the following address:

Canusa-CPS
2408 Timberloch Place
Building C-8
The Woodlands, TX 77380
(281)-367-8866

Dura Plate 100 Liner System, A-LOK® full compression seals and Butyl-Lok Sealants are available from the manufacturer at the following address:

A-Lok® Products, Inc.
P.O. Box 1647
697 Main Street
Tullytown, PA 19007
(800)-822-2565

D-Lok Rubber Gasket is available from the manufacturer at the following address:

Atlantic Concrete Products, Inc.
8900 Old Route 13
P.O. Box 129
Tullytown, PA 19007
(215)-945-5600

Manhole steps are available from the manufacturer at the following address:

M.A. Industries, Inc.
303 Dividend Drive
Peachtree City, GA 30269
(800)-241-8250

Part #A6DB is available from the manufacturer at the following address:

Reliner®/Duran Inc.
53 Mount Archer Road
Lyme, CT 06371
(800)-508-6001

Sonotube® Round Concrete Forms are available from the manufacturer at the following address:

Sonoco®
1 North Second Street
Hartsville, SC 29550
(888)-875-8754

NPC Kor-N-Seal® Pipe-to-Manhole Connectors are available from the manufacturer at the following address:

Trelleborg Pipe Seals Milford, Inc.
250 Elm Street
P.O. Box 301
Milford, NH 03055
(800)-626-2180

Make detailed drawings for pipe and fittings indicating piping layout in plan and elevation as may be required to clearly indicate all pipe and fittings. Completely dimension the drawings and indicate connections to equipment and reference to approved shop drawings of such equipment. Ensure drawings include field verified dimensions.

Include a complete schedule of pipe, fittings, and specials with mark numbers on the schedules and on drawings corresponding to the mark numbers which will be on the pipe, fittings, and specials when delivered to the job site, as called for hereinafter.

The Borough of Lavallette will only accept bolted covers at locations where a bolted cover currently exists.

Submit a certificate of compliance for pipe, fittings, joints and couplings to the RE.

All materials are subject to approval by the respective utility owner.

652.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

Do not perform construction of new sanitary sewer facilities within Toms River Township and the Borough of Lavallette until NJDEP issues the Treatment Works Approval Permit, as specified in 107.01.02. New sanitary sewer facilities include proposed manholes and sanitary sewer mains at locations in which they do not currently exist. Obtain a copy of the approved permit prior to commencing any new sanitary sewer work. Replacement work is permissible without the Treatment Works Approval Permit and includes the resetting and reconstruction of existing manholes and the upgrading of existing sanitary pipe in place.

Survey and verify all existing inverts for sanitary facilities replaced in same location.

Prior to initiating work, conduct utility investigations as specified in 105.07.01B. To avoid conflicts with proposed infrastructure (drainage pipe, inlets, MTDs utilities, ITS facilities, traffic signals, etc.) and existing facilities to remain, the Contractor may utilize varying pipe depth installation (3' minimum and variable), use of fittings, and pipe joint deflection (within the recommended tolerances of pipe manufacturer requirements). Submit recommended adjustments to the sewer main alignment to the RE for approval.

652.03.01 Sewer Pipe

A. Scheduling of Work.

Ensure all interruption of service is in accordance with the procedures and timing restrictions of the respective municipal utility authority (TRMUA, Brick Utilities, Borough of Lavallette, and OCUA).

For force main work, coordinate with OCUA for shutdowns to their facilities. OCUA will perform all shutdowns. Pump out effluent from section of pipe as necessary to perform work.

C. Excavating.

THE FOLLOWING IS ADDED:

Ensure bedding for manhole bases and trenches are thoroughly dewatered. Ensure ground water is continuously drawn down to an elevation two (2) feet below bottom of the bedding. Continue dewatering operations for as long as the trench is open and for a minimum of two full working days.

E. Installing Sanitary Sewer Gravity and Force Mains.

THE FOLLOWING IS ADDED TO THE SECOND PARAGRAPH:

Install transition couplings according to the manufacturer's recommendations.

Install steel casing lengths as shown on the Plans. Paint exterior with two coats of bitumastic paint to 12 mils minimum.

Install casing spacers, insulators, and end seals according to the manufacturer's recommendations.

Install centering devices as shown on the Plans, but positioned at not less than according to the manufacturer's recommendations. Place centering devices on pipe during pipe assembly and position within casing.

THE FOLLOWING IS ADDED:

Install concrete cradles at locations where new sanitary mains are joined to existing sanitary mains.

F. Thrust Blocks.

THE SUBPART IS CHANGED TO:

F. Restraint Harnesses and Restrained Coupling Systems. For sewer force mains, install restraint harnesses at all joints according to the manufacturer's recommendations. Install restrained coupling systems at all locations force main and existing ductile iron pipe are joined together according to the manufacturer's recommendations. Ensure all joints and fittings for the force mains are fully restrained.

G. Sewer Pipe Testing.

1. Gravity Main Sewer Testing.

THE FOLLOWING IS ADDED:

For sanitary sewers mains constructed "in-kind", in which replacement of the sewer segment is installed in the same location and meets existing inverts, perform a closed circuit television (CCTV) inspection upon completion of the installation as specified in 652.03.08. Conduct testing of each sanitary sewer run from manhole to manhole.

Perform the following tests for TRMUA and Borough of Lavallette facilities:

Preliminary Testing for PVC Gravity Mains (after installation of all underground utilities and completion of road subgrade)

- 1) Go-No-Go/Mandrel deflection test (maximum allowance of 5% short term deflection).
- 2) Infiltration or exfiltration (air pressure test) as applicable.

All sewer mains shall be flushed by a jet type hose prior to deflection test if deemed necessary by the Authority Inspector. All individual laterals from the sewer main to the curbside cleanout, including the tail piece, as applicable, shall be included with the sewer main air pressure test. A temporary, leak-proof, bulkhead type plug shall be installed in the upstream (inlet) side of the manhole furthest downstream in any sewer main or branch under construction, and shall remain intact and unloosened until written permission is received from the Authority Engineer to remove same. This permission will not be granted until each section of the sewer has been cleaned and flushed in a manner acceptable to the Authority's Engineer. No sewer connections shall be made to a street main, whether pressure air tested or not, unless under supervision and inspection of the Authority representative.

Final Testing for PVC Gravity Mains (after final paving has been installed)

- 1) Go-No-Go/Mandrel deflection test (maximum allowance of 7.5% deflection). Mains shall be flushed by a jet type hose prior to deflection test.

Testing Procedures:

Air Pressure Test (PVC-Gravity)

The air pressure tests shall be performed between two manholes, and shall include all related sewerage facilities, including lateral connection and cleanouts.

Prior to air testing, the section of pipe to be tested shall be flushed and cleaned of sand and other foreign matter, if deemed necessary by the Inspector. The test shall be made on the section of pipe from manhole to manhole. The section of pipe to be tested shall be isolated and a plug installed at each end of pipe at the manholes. The ends of all branches, laterals and wyes shall also be plugged. Plugs shall be securely braced. The plugs at each end of the pipe at the manholes must have provisions for connecting an air hose.

Connect one end of the air hose to the plug, and the other to a portable air compressor, equipped with pressure regulators and gauges (upper limit of gauge dial not to exceed 30 psig). The pressure regulators are used to control the rate at which air flows to the test section, and to monitor air pressure in the pipe. Supply air to the pipe section, monitoring it so that the pressure inside the pipe does not exceed 5.0 psig. When pressure reaches 4.0 psig, throttle the air supply so that the internal pressure is maintained between 4.0 and 3.5 psig for at least two minutes. This allows time for stabilization within the pipe walls.

After two minutes of stabilization, disconnect the air supply, and allow pressure to decrease to 3.5 psig. At 3.5 psig, start a stop watch to determine the time required for pressure to drop to 2.5 psig. The time required for a loss of 1.0 psig at an average of 3.0 psig can be used to compute the rate of air loss.

The following table may be used to determine the maximum allowable time for pressure to drop 1.0 psig for various pipe:

<u>Pipe Size</u>	<u>Minutes</u>	<u>Seconds</u>
6"	2	15
8"	3	57
10"	4	43
12"	5	40
15"	7	05
18"	8	30

Deflection Test (PVC)

The Go-No-Go/Mandrel test for deflection shall be performed to determine compliance with manufacturer's and engineer's installation specifications to detect maximum short term deflection of 5% prior to final paving and 7.5% after final paving. The gauge shall be approved by the Authority's Engineer or his representative prior to use. The gauge shall be pulled by hand in a smooth and easy manner to avoid

jamming. Inability of the device to pass through any portion of the pipe shall be deemed as a test failure. Failure of the Go-No-Go test shall require that the pipe be subject to complete video inspection between manholes of the failed pipe section. The video shall become property of the Authority immediately upon completion of the video recording in the field and shall be turned over to the Authority representative at that time. Examination of the video by the Authority's Engineer shall determine the method and quantity of pipe reconstruction or rehabilitation at the applicant's cost. The decision of the Authority's Engineer shall be final.

Upon successful completion of the Go-No-Go test and video inspection, if required, the lines shall then be subject to further air pressure testing. All testing described herein shall be witnessed by the Authority's Engineer or his authorized representative.

Perform the low pressure hydrostatic infiltration/exfiltration test or a low pressure pneumatic test for Brick Utilities facilities as follows:

Low Pressure Hydrostatic Test (Sewer)

Prior to test for watertightness, the Contractor, when directed by the Resident Engineer, shall remove all debris from manholes and shall thoroughly flush sewers in such a manner as to permit no sand, sediment, stones, or other foreign materials from entering completed sections of the pipeline.

If the ground water level is at or above the top of the pipe, the Contractor shall dewater the sewer and conduct a satisfactory test to measure infiltration for at least 24 hours. The rate of infiltration shall not exceed 50 gallons per inch of inside diameter per mile of pipe per 24 hours. Repairs to pipe shall be made in kind; chemical grouting or repair clamps will not be permitted. If leakage exceeds the specified amount, the Contractor shall make the necessary repairs or replacements required to permanently reduce the leakage to within the specified limit, and the test shall be repeated until the infiltration conforms to the requirements specified herein.

In the event that the ground water level is lower than the top of the pipe, the Contractor shall conduct an exfiltration test. The test shall be conducted from manhole to manhole. The pipe shall be filled and additional water introduced into the manhole to raise the level two (2) feet above the top of the pipe in the upstream manhole.

The Contractor shall furnish all water required for the exfiltration test. The quantity of water to maintain this level is to be measured. The test shall be maintained for a 48 hour period. The rate of exfiltration shall not exceed 50 gallons per inch of inside diameter per mile of pipe per 24 hours. There shall be no gushing or spurting streams leaving the sewer. Repairs to pipe shall be made in kind. Chemical grouting or repair clamps will not be permitted. If leakage exceeds the specified amount, the Contractor shall make the necessary repairs or replacements required to permanently reduce the leakage to within the specified limit and the test shall be repeated until the exfiltration conforms to the requirements specified herein.

The Contractor may not make allowances for service connections with the infiltration and exfiltration testing of the gravity sewers.

Upon Completion of the exfiltration test, water shall be removed from the sewer and discharged in conformance with erosion control sections of this specification.

Low Pressure Pneumatic Test (Sewer)

The test shall be performed between manholes and subsequent to completion of backfill but prior to replacement of pavements. The following procedure shall be implemented as a method of test:

- 1) Each length of pipe shall be cleaned by passing a snug fitting ball through the pipe.
- 2) Plug all pipe outlets with suitable test plugs and brace all plugs securely to prevent blowout.
- 3) If the pipe to be tested is submerged in ground water, a test pressure probe shall be inserted by boring or jetting into the backfill to the level of the center of the pipe and the back pressure determined while passing air through the probe. The amount of back pressure thus determined shall be added to all gauge pressures required for testing the submerged line.

- 4) Add air slowly to the plugged pipe under test until the internal pressure is raised to 4.0 psi above back pressure.
- 5) Check exposed pipe and plugs for abnormal leakage, by coating with a soap solution or by means of an approved smoke device. If failures are observed bleed off the air, make repairs and repressurize.
- 6) After an internal pressure of 4.0 psig above back pressure is obtained, allow at least 2 minutes for air temperature to stabilize, adding only the amount of air required to maintain 4.0 psig above back pressure.
- 7) After the 2 minute period, disconnect the air supply by valve action.
- 8) When the pressure decreases to 3.5 psig above back pressure, start a stopwatch. Determine the time in seconds, for the interval during which the internal pressure drops to 2.5 psig above back pressure. The time interval shall not be less than the following tabulated values:

TIME IN MINUTES AND SECONDS

TEST LENGTH	100	150	200	250	300	350	400	450
DIAMETER:								
8"	3-47	3-47	3-47	3-47	3-47	4-26	5-04	5-4
10"	4-43	4-43	4-43	4-57	5-56	6-55	7-54	8-54
12"	5-40	5-40	5-42	7-08	8-33	9-48	11-24	12-5
15"	7-05	7-05	8-54	11-08	13-21	15-35	17-48	20-0

* If the observed interval is less than the required interval, the leaks shall be located, repaired and the line retested.

- 9) The pipe shall be considered acceptable if there are no obstructions in the pipe, if the pipe is at the required line and grade and if the time for the internal pressure to drop from 3.5 psig above back pressure, is equal to or greater than the appropriate tabulated value. Interpolation for values not tabulated is permissible. If the observed interval is less than the required interval, the leaks shall be located repaired and the line retested, prior to satisfactory performance under the specified test.
- 10) The Contractor shall furnish all equipment for the test. Gauges shall be of the recalibration type. All equipment shall be subject to approval by the Engineer.

The forgoing test is required as an acceptance test. There is nothing construed herein to prevent the Contractor from using similar presumptive methods prior to completion of backfill, but no presumptive testing will be considered as an acceptance test.

Deflection Test for PVC Sewer Pipe

Upon completion of the pipe installation and backfill to grade, pipe shall be tested for diameter deflection as ordered by the Engineer. Maximum allowable deflection shall be five percent of the internal diameter of the pipe. Deflection testing shall be performed by using a "mandrel", a Go/No-Go plug or deflectometer approved by the Engineer. The Contractor shall furnish all equipment, material and labor for the test.

Any pipe found in which deflection exceeds five percent of the internal diameter of the pipe shall be removed and replaced at no additional cost to the Owner.

2. Force Main Sewer Testing.

THE FOLLOWING IS ADDED:

Conduct pressure and leakage test in pipelines in accordance with AWWA C600. Furnish and install temporary testing plugs or caps, pressure pumps, pipe connections, meters, gages, equipment, and labor. The pipe to be tested must be sufficiently backfilled and braced to prevent movement while under test pressure. Joint restraint at fittings should be permanent and constructed to withstand test pressure. Test ends should be restrained to withstand the appreciable thrusts that are developed under test pressure. Slowly fill section of pipe with water.

All air should be expelled from the pipeline during filling and again before making either pressure or leakage tests. Automatic air-release valves are recommended. Compressed entrapped air can create surges that exceed the test pressure prescribed and could cause pipe failure. Furthermore, entrapped air may cause imprecise pressure test results.

a. Pressure Testing:

Conduct pressure test for 2-hour duration.

1. $P_{test} = 1.5 \times P_{operating} + P_{operating}$
2. $P_{operating} = 30 \text{ psi}$

The purpose of a pressure test is to locate defects in materials or workmanship, thereby permitting proper repair. Test pressure should not exceed design pressure for pipe, appurtenances, or thrust restraints, unless approved by the manufacturer.

Do not build up pressures greater than specified for test. Specified test pressure should be maintained for the specified test time while monitoring for pressure loss. Air pressure testing of installed PVC pressure pipe is expressly prohibited for reasons of safety, should failure occur.

If unable to achieve and maintain specified pressure for two hours with no additional pumping, tested section of pipe fails test.

b. Leakage Test:

1. Apply normal operating pressure and maintain pressure at a constant level throughout the period of test. Measure the amount of additional water pumped in during the test provides a measurement of the amount of leakage, if any. If the amount of additional water introduced into the line during the test exceeds the testing allowance, the section fails the leakage test. If the amount of water added is less than the allowable, the section passes the test.
2. Repair all visible leaks, regardless of the amount of leakage.

If section fails the pressure or leakage test, locate, uncover, and repair or replace defective pipe, fitting, or joints,. Conduct additional tests and repairs until section passes test.

After testing on any section of pipe has been completed to the satisfaction of the RE, drain the piping of all water.

H. Backfilling.

THE FOLLOWING IS ADDED:

Backfill the annular space of the casing pipe with sand, pea gravel, grout or equal, to completely fill all voids in the space. Convey backfill material into place by air through a hose to its final position. In general, the process will be considered complete when no more fill can be forced into the space. Preserve the interior surface of the pipe from any damage.

652.03.04 Sanitary Sewer Service Connections

THE FOLLOWING IS ADDED:

Construct laterals at least 3 feet below the proposed grade, as measured from the top of the pipe to the grade elevation. Install deep house connections for sewer lines exceeding 10 feet of depth from finished grade. Install 4-inch laterals for residential connections with a minimum slope of 1/4 inch per foot. Install 6-inch laterals, if warranted, for commercial/industrial connections with a minimum slope of 1/8 inch per foot. Where possible, connect sewer laterals to existing laterals using couplings. Install cleanouts at grade at all changes in lateral direction requiring bends. Do not install more than 75 feet of continuous sewer lateral without at least 1 cleanout. Locate cleanouts such that all portions of

the lines can be cleaned by rodding. Do not install cleanouts within driveways or sidewalks. Permanently mark top of curbs with letter "H" indicating the location of the curbside cleanouts. Do not stamp more than 1/2-inch deep.

652.03.05 Sanitary Sewer Manhole

THE FOLLOWING IS ADDED:

Wrap joints of each manhole section for Brick Utilities with heat shrinkable membrane.

Install interior PVC lining for Brick Utilities, Borough of Lavallette, and TRMUA manholes according to the manufacturer's recommendations. Apply the lining to the concrete channel and bench of each manhole.

Install manhole steps for Brick Utilities and Borough of Lavallette manholes up to 15 feet in depth.

Install vertical ladder for Brick Utilities manholes with depths greater than 15 feet. Insert steps into punched holes and weld to side rails. Bolt ladder to structure with anchor bolts inserted 4 inches into the wall.

Install vertical ladder for TRMUA and Borough of Lavallette manholes with depths greater than 10 feet.

Where drop connections are required, install internal drop connections for new manholes for Brick Utilities.

652.03.06 Reconstruct Sanitary Sewer Manhole

THE FOLLOWING IS ADDED:

Prior to performing any reconstruction work on existing sanitary sewer manholes, confirm with the RE and the utility owner that the condition of the manhole is adequate for the work to be performed. If the RE and utility owner determine that the existing manhole is in need of replacement, construct a new manhole in accordance with 652.03.05.

For OCUA repaired or reconstructed concrete benches, apply underlayment to a minimum thickness of 1/2 inch. Coat with lining to a thickness of 60 mils.

For TRMUA and Borough of Lavallette manholes, if new grade is to raise 1-1/2 inches to 3 inches, install manhole adjustment ring.

Where existing sanitary sewer lines are to be replaced with new PVC sanitary sewer lines, core the existing concrete manhole with a coring machine where the existing asbestos concrete pipe material is being removed from the manhole. Do not use pneumatic hammers, chipping guns, sledge hammers or other similar means to provide a connection. Install the flexible pipe-to-manhole connector with stainless steel clamps to connect new PVC sanitary sewer pipe to the existing manhole.

652.03.08 Video Inspection of Sewer

THE ENTIRE TEXT IS CHANGED TO:

Upon the completion of all installations of new sanitary sewer mains, perform closed circuit television (CCTV) inspections for each sanitary sewer pipe run. All CCTV inspections shall be performed by experienced personnel trained in performing these types of inspections.

Upon the completion of all installations of each new sanitary sewer lateral from the new sanitary sewer mains to the sewer clean-outs, perform CCTV inspections for each of the installed sanitary sewer laterals. All CCTV inspections shall be performed by experienced personnel trained in performing these types of inspections.

Submit to the Resident Engineer, for acceptance and approval, three (3) copies of unedited post-installation DVDs and associated inspection reports for each of the completed CCTV inspections of the newly installed sanitary sewer mains and newly installed sanitary sewer laterals prior to the final paving. Provide the Owner of the sanitary sewer systems with two (2) copies of the approved post-installation DVDs and associated inspection reports for each of the completed CCTV inspections.

652.04 MEASUREMENT AND PAYMENT
 THE FOLLOWING PAY ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
VIDEO INSPECTION OF SEWER	LINEAR FOOT

THE FOLLOWING PAY ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
12" POLYVINYL CHLORIDE SEWER PIPE, GRAVITY	LINEAR FOOT
12" POLYVINYL CHLORIDE SEWER PIPE, FORCE MAIN	LINEAR FOOT
__" STEEL CASING	LINEAR FOOT

THE FOLLOWING IS ADDED:

The Department will make payment for pipe encasements under CONCRETE ENCASEMENT.

The Department will not make separate payment for the required video inspections specified in 652.03.08.

THE FOLLOWING SECTION IS ADDED:

SECTION 654- JCP&L FACILITY

654.01 DESCRIPTION

This Section describes the requirements for installing, relocating and removing Jersey Central Power and Light (JCP&L) electric utility facilities including conduits, manholes, transformer vaults, handholes, and appurtenances and also includes the requirements for transferring electric services.

654.02 MATERIALS

Except for the materials noted below, JCP&L will supply all materials necessary for the work at no cost to the Contractor. Provide JCP&L written notice 30 days in advance of when materials will be required. Ensure the electric subcontractor takes delivery of the materials from JCP&L's storage facility within two weeks of the notice from JCP&L indicating that the material is available. Materials may be located at more than one JCP&L storage facility. If the electric subcontractor fails to take delivery, the material may not be available, and the electric subcontractor may be required to provide an additional request for materials. The Contractor is responsible for compensating the Department for any additional handling costs incurred by JCP&L resulting from the failure to take delivery within the time required.

The electric subcontractor is responsible for loading the material, delivering it to the job site, and all subsequent handling and delivery within the jobsite. Store and protect all materials received from JCP&L. Return and deliver all excess materials furnished by JCP&L to JCP&L's storage facility. Obtain a receipt for all material received from JCP&L, maintain a documented inventory of materials used and obtain a receipt for all material returned to JCP&L.

Provide materials as specified:

Tack Coat 64-22: PG 64-22.....	902.01.01
Concrete	903.03
Curing Materials.....	903.10
Controlled Low Strength Material (CLSM)	903.09
Hot Mix Asphalt (HMA).....	902.02
Sealer, Hot-Poured	914.02
Polymerized Joint Adhesive	914.03

654.03 CONSTRUCTION

654.03.01 Electric

A. Prequalification.

THE ENTIRE TEXT IS CHANGED TO:

Only a prequalified electric subcontractor, approved by JCP&L, may construct and relocate JCP&L electric facilities. The following is a list of electric subcontractors that have been previously approved by JCP&L. This list is provided as information only, and is not an endorsement by the Department of any subcontractor. The Contractor is responsible for soliciting from a subcontractor that will be approved by JCP&L when preparing its Bid. Work restricted to the electric subcontractor does not preclude the Contractor from performing the work of layout, traffic control, sawcutting, pavement removal, temporary or final pavement restoration, and landscape restoration associated with the work of installing or relocating JCP&L electrical facilities.

APPROVED ELECTRICAL SUBCONTRACTOR

APPROVED ELECTRICAL CONTRACTORS

DX & TX Overhead

Hawkeye, LLC
100 Marcus Blvd
Hauppauge, NY 11788
Tel: 631-447-3100
Fax: 631-776-1847
Att: Rick Reed - Mgr. Operations
email: rreed@hawkeyellc.com

M.J. Electric, Inc.
1047 Shoemaker Avenue
PO Box 310
Shoemaker, PA 19555-310
Tel: 610-562-7570 x 4802
Fax: 610-562-1375
Att: Mike Troutman
email: mtroutman@mjelectric.com

Henkels & McCoy, Inc.
985 Jolly Road
Blue Bell, PA 19422
Tel: 215-283-7707
Fax: 215-283-7573
Att: Alan L. Lippy - Director, Power Operations East
email: alippy@henkels.com

Asplundh
161 Second Street
Wilkes Barre, PA 18702
Tel: 570-947-1101
Fax: 570-822-0770
Attn: Vincent Stanbro
email: v.stanbro@asplundh.com

JBL Electric Inc.
3001 South Clinton Avenue
South Plainfield, NJ 07080
Tel: 800-525-4628
Att: Robert Dougherty – Sr PM/EST
email: rdougherty@jblelectric.com
Cell : 973-908-9619

Tri-M Corp
PO Box 69
204 Gale Lane
Kennett Square, PA 19348
Tel: 610-444-1001 ext 200
Fax: 484-731-0209
Attn: Katie Bleiler
email: kbleiler@energtest.com

MYR (Harlan & The L.E. Myers Company)
1416 Trindle Road 3-A
Carlisle, PA 17013-9718
Tel: 717-243-4600
Fax: 717-243-3633
Att: Jon Arganbright
email: jarganbright@myrgroup.com

Richardson & Wayland
PO Box 12648
Roanoke, VA 24027
Tel: 540-344-3244
Attn: Andy Euclide
email: aeuclide@rwec.com

SREC Resources
PO Box 7250
Sussex, NJ 07461
Attn: Chris Reese

J Wm Foley
340 Chestnut Avenue
West Berlin, NJ 08091
Attn: Bob Dougherty

Tel: 973-875-5101 x123
Fax: 973-875-2394
email: creese@sussexrec.com

Tel: 856-768-8800
Fax: 856-768-8884
email: rdougherty@jwmfoley.com

DX-UG (Civil & Electrical)

Henkels & McCoy, Inc.
985 Jolly Road
Blue Bell, PA 19422
Tel: 215-283-7707
Fax: 215-283-7573
Att: Alan L. Lippy - Director, Power Operations East
email: alippy@henkels.com

JBL Electric Inc.
250 Lackawanna Ave.
West Paterson, NJ 07424
Tel: 973-774-4218
Att: Jim Leary - President
email: jleary@jblelectric.com
Att: Robert Dougherty – Sr PM/EST
email: rdougherty@jblelectric.com
Cell : 973-908-9619

SREC Resources
PO Box 7250
Sussex, NJ 07461
Attn: Chris Reese
Tel: 973-875-5101 x123
Fax: 973-875-2394
email: creese@sussexrec.com

J Wm Foley
340 Chestnut Avenue
West Berlin, NJ 08091
Attn: Bob Dougherty
Tel: 856-768-8800
Fax: 856-768-8884
email: rdougherty@jwmfoley.com

DX-UG (Civil Only – Non Electrical)

Union Paving & Construction
1140 Globe Ave.
Mountainside, NJ 07092
Tel: 908-232-0738
Fax: 908-232-4100
Attn: Scott Woodfield – CFO
email: swoodfield@unionpaving.com

J. Fletcher Creamer & Son, Inc.
1701 E. Linden Avenue
Linden, NJ 07036
Tel: 908-925-3200
Fax: 908-925-3350
Att: Ted Paliwoda
email: tpaliwoda@jfcson.com

HC Constructors
PO Box 855
Whitehorse Station, NJ 08889
Tel: 908-534-3833
Fax: 908-534-3851
Attn: Harry Chowansky – VP
email: hchowansky@hconstructors.com

W&B
75 South Gold Drive
Hamilton, NJ 08691
Tel: 609-584-1100
Attn: C. Waters – Principal
email: cwaters@watersandbugbee.com

George Harms Construction Co, Inc
PO Box 817
Farmingdale, NJ 07727
Tel: 732-938-4004
Fax: 732-938-2782
Attn: James Duffe – Vice President Project Management
email: jduffe@ghcci.com

J Wm Foley
340 Chestnut Avenue
West Berlin, NJ 08091
Attn: Bob Dougherty
Tel: 856-768-8800
Fax: 856-768-8884
email: rdougherty@jwmfoley.com

Approved Directional Boring

J. Fletcher Creamer & Son, Inc.
1701 E. Linden Avenue
Linden, NJ 07036

Danella
2290 Butler Pike
Plymouth Meeting, PA 19462

Tel: 908-925-3200
Fax: 908-925-3350
Att: Ted Paliwoda
email: tpaliwoda@jfcson.com

Tel: 908-447-4886
Fax: 215-547-2990
Attn: Bill Lynn

Kmetz Inc
10 Fresh Ponds Rd
East Brunswick, NJ
Tel: 732-821-0533
Fax: 732-821-5099
Att: Kevin Kmetz
Email: kmetzinc@comcast.net

Cablelinks
54 West Broad Street
Trumauersville, PA 18951
Tel: 215-804-0855
Fax: 215-804-0869
Attn: Mary Jo Gaumer – President
email: cablelinks@comcast.net

W&B
75 South Gold Drive
Hamilton, NJ 08691
Tel: 609-584-1100
Attn: C. Waters – Principal
email: cwaters@watersandbugbee.com

General Contractors

Henkels & McCoy, Inc.
985 Jolly Road
Blue Bell, PA 19422
Tel: 215-283-7707
Fax: 215-283-7573
Att: Alan L. Lippy - Director, Power Operations East
email: alippy@henkels.com

Union Paving & Construction
1140 Globe Ave.
Mountainside, NJ 07092
Tel: 908-232-0738
Fax: 908-232-4100
Attn: Scott Woodfield – CFO
email: swoodfield@unionpaving.com

JBL Electric Inc.
3001 South Clinton Avenue
South Plainfield, NJ 07080
Tel: 800-525-4628
Att: Robert Dougherty – Sr PM/EST
email: rdougherty@jblelectric.com
Cell : 973-908-9619

George Harms Construction Co, Inc
PO Box 817
Farmingdale, NJ 07727
Tel: 732-938-4004 x 2006
Fax: 732-938-2782
Attn: James Duffe – Vice President
Project Management
email: jduffe@ghcci.com

- B. Indemnification.** The Contractor agrees to indemnify and hold harmless JCP&L, its officers, employees and agents from liability and claims related to the work described under Section 654. This requirement does not establish JCP&L as a third party beneficiary; the provisions specified in Section 107.10 are unaltered.
- C. Scheduling of Work and Interruption to Utilities.** Provide the RE and the designated JCP&L representative with a detailed schedule of when the electric utility work will be performed. Indicate in the schedule for each activity the following information: the work locations; the number of crews; and whether the work will be performed during a day shift or night shift, or on weekends. Coordinate all electric utility work with the JCP&L representative, and notify the RE and the JCP&L representative at least two weeks prior to starting electric utility work. Do not interrupt existing electric service until approved by the JCP&L representative.

Weather conditions may prevent connections to existing systems between June 1 and September 30. Do not perform work which will require electric transmission service interruptions from June 1 through September 30 without the approval of JCP&L. JCP&L may extend this period based on weather conditions and system demand. Notify JCP&L at least one month in advance of commencing conductor work.

If service transfers are required, coordinate service transfers with the JCP&L representative. Notify the property owner and all tenants affected by service interruptions or transfers prior to making the service transfer. Minimize

disruption to normal operations of existing facilities and minimize any interruption of electric service to JCP&L customers. Protect existing facilities during construction and installation of the service transfer.

- D. Quality Control and Quality Assurance.** Provide access to the work for the JCP&L representative at all times. Perform all electric utility work in a manner acceptable to the JCP&L representative. Perform all electric utility work in accordance with JCP&L standards and details.
- E. Safety.** Perform work in accordance with applicable OSHA regulations, N.J.S.A. 34:6-47 “High Voltage Proximity Act”, and JCP&L safety standards.
- F. Abandonment and Removal.** Prior to beginning work, review the condition of all existing electric utility facilities noted to be removed with the JCP&L representative. If the JCP&L representative designates the material to be salvaged, remove the material and deliver it to a JCP&L storage facility. Remove and dispose of all other electrical utility material designated for removal.
- G. Excavation.** When excavation is required in areas having existing pavement and sidewalk, sawcut to the full depth of the existing pavement and sidewalk. Excavate trenches for conduit, manholes and vaults and appurtenances. Provide vertical sides for excavations within the traveled way, shoulder, sidewalk areas, and where existing facilities require protection. Remove unstable material at the bottom of the excavation and backfill with granular material. Do not excavate trenches more than 300 feet in advance of installing conduit unless approved by the RE. Provide and maintain trench crossings where necessary to maintain access. Do not leave trenches open overnight unless protected by temporary fencing or steel plates. Remove and dispose of excess or unsuitable material as specified in 202.03.07.
- H. Backfill.** Backfill with suitable material in lifts not exceeding 6 inches thick, loose measurement. If the backfill is predominantly granular material, compact the backfill material with a vibratory plate compactor. For material that is not predominately granular, compact the backfill material with a vibratory rammer compactor. If it is not possible to compact the backfill material, the Contractor may backfill with CLSM with the approval of the JCP&L representative. If using CLSM, install as specified in 601.03.01.F.
- I. Restoration.** Restore areas disturbed in the performance of electrical utility relocations to its original condition. In areas that are disturbed for which the plans provide final grading, pavement or landscaping, provide temporary restoration to the satisfaction of the RE. If open-cut trenching across a road is required, restore the pavement with in-kind construction.
- J. Field Testing.** Perform a high-potential test (also known as a dielectric voltage withstand test) on all cables and splices prior to energizing. Testing must be performed by a person who is qualified to operate the test equipment, and is familiar with the cable system. Ensure that the cables are disconnected from non-cable systems equipment, and that adequate physical clearances are maintained between all cable ends, energized cables, and electrical grounds and all other equipment during the test. Prior to performing the test, verify that all taps or laterals in the circuit are cleared. In the event hot poured compound filled splices and terminations are involved, do not perform testing until they have cooled to ambient temperature. Set the relays in the high voltage direct current test equipment to operate between 5 and 25 milliamperes leakage. The shape of the leakage curve under constant voltage is more important than the absolute leakage current of a “go or no go” withstand test result. The field test voltage is related to the final factory applied dc potentials using a factor of 80 percent.

Ensure the high potential test is performed in the presence of the JCP&L representative. Apply a direct current field test voltage according to the following table:

Field Test Values				
Rated Voltage	dc Hi-Pot Test		dc Hi-Pot Test	
Phase to	(15 Minutes)			
Phase	Wall - mils	Kv	Wall - mils	kV
5000	90	25	115	35
8000	115	35	140	45
15000	175	55	220	65
25000	260	80	320	95

28000	280	85	345	100
35000	345	100	420	125
46000	445	130	580	170
69000	650	195	650	195

Note: If the leakage current quickly stabilizes, the duration may be reduced to 10 minutes.

After the voltage has been applied and the test level reached, record the leakage current at one-minute intervals. If the leakage current decreases or stays steady after it has leveled off, the cable is considered satisfactory. If the leakage current starts to increase, excluding momentary spurts due to supply-circuit disturbances, extend the test to see if the rising trend continues. At the conclusion of the test, discharge the circuit through the test set and voltmeter circuit. After the potential drops below 95% of the test value, ground the cable and discharge the circuit. Leave the grounds on all conductors for a minimum of four times as long as the test voltage was applied.

Remove and replace cables that fail to meet the requirements of the direct current field test. The Contractor is responsible for reimbursing the Department for any additional material costs incurred by the Department resulting from the failure to meet the requirements of the direct current field test.

- K. Energizing Lines.** Energize lines with the guidance of the JCP&L representative. Prior to energizing lines, submit a request to JCP&L. Switching orders may only originate from JCP&L employees. Submit a request for permission to energize transmission lines 10 days in advance of when the work will be performed. Request permission to energize distribution lines in a manner that will permit the JCP&L representative to submit a request to JCP&L's Dispatch Office by noon the previous business day.
- L. As-builts.** Upon completion of the work, submit to JCP&L as-built drawings in accordance with JCP&L standards. Prints of construction drawings, marked to show the final location, are acceptable. Provide a copy of the as-built drawings to the RE.

654.04 MEASUREMENT AND PAYMENT

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
ELECTRICAL UTILITY RELOCATION, JCP&L	LUMP SUM

DIVISION 700 – ELECTRICAL

SECTION 701 – GENERAL ITEMS

701.03.01 Existing Systems

THE FOLLOWING IS ADDED:

If new cable or wire is designated to be installed into existing conduit systems, clean and swab the conduit system prior to installing the cable or wire. After cleaning, test each conduit by pulling through a metal ball with a diameter at least 85 percent of the nominal inside diameter of the conduit to ensure the conduit is free of any obstruction or foreign material. If the ball fails to pass through the conduit, repair or replace the defective conduit as directed by the RE. Restore disturbed areas to original condition.

701.03.05 Rigid Nonmetallic Conduit

B. Installation.

THE LAST PARAGRAPH IS CHANGED TO:

Install true tape marked in 1-foot increments for the length of the rigid non-metallic conduit. Install a tracer wire continuously for the entire run of conduit, including through the junction boxes, mounting it on the wall. Splice the tracer wire only in the junction box. Seal the ends of rigid nonmetallic conduit carrying the tracer wire. If wire or cable is not scheduled to be installed within 6 months of conduit installation, cap and seal the other conduits leaving the true tape inside. Install warning tape in the trench above the conduit.

701.03.15 Cable and Wire

A. Installing.

THE FOLLOWING IS ADDED

Test the existing tracer wire in the conduit for continuity. If there is no existing tracer wire in any of the conduits in the same trench, then install a continuous tracer wire between the adjacent junction boxes without any splice when installing the cable and wire as directed by the RE.

C. Connection and Coordination with Utility Services.

THE FOLLOWING IS ADDED TO THE FOURTH PARAGRAPH:

At Substantial Completion provide the RE with a letter requesting transfer of utility services providing the latest copy of the utility bill from each utility company. Such transfers are to be effective beginning the next monthly billing cycle after Substantial Completion or as directed by the RE.

701.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

If restoration of disturbed areas includes pavement, curb, sidewalk, driveway or island, the Department will make payment for such work as specified in 104.03.03.

When the RE directs the installation of a new conduit or a repair to the defective conduit, the Department will make payment for this work as specified in 104.03.03.

When the RE directs the Contractor to install a tracer wire in existing conduit, the Department will make payment for this work as specified in 104.03.03.

SECTION 702 – TRAFFIC SIGNALS

702.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

ROUTE 35 RESTORATION
CONTRACT NO. 004950321

After placing a new, temporary or interim traffic signal system into operation, inspect the traffic signal system every 2 months. Fill out a Contractor Maintenance Traffic Signal Inspection Report (Form EL-16C) when the traffic signal system becomes operational, when the traffic signal system is modified, and at every 2-month inspection.

Maintain as-built drawings of each signal modification. Place copies of the as-built drawings for each traffic signal system modification, Forms EL-16C, and Forms EL-11C in a plastic pocket mounted inside the cabinet door of each controller cabinet. Also provide a copy of all forms and as-built drawings to the RE.

If a new, temporary or interim traffic signal system fails or becomes damaged, repair and restore the traffic signal system to normal operation. Begin repair of the traffic signal system within 2 hours of receiving notice of damage or malfunction from the Department, State police, or local authorities. Ensure that workers assigned to such repair work continuously until the traffic signal resumes normal signal operation.

For each response to a system failure or damage, fill out a Contractor Maintenance Emergency Call Record (Form EL-11C) and place it in a plastic pocket mounted inside the cabinet door of each controller cabinet.

If the Contractor fails to respond to a failure or damage notification and begin work within 2 hours of notification, or does not continue to work until the traffic signal system resumes normal operation, the Department, in the interest of safety, will respond with its own forces to restore normal operation. If the Department mobilizes its forces to effect repairs, the Contractor agrees to pay the Department a sum of \$3000 for costs of mobilizing its forces and equipment. In addition, the Contractor must pay the Department the actual cost of material used for the repair and pay the actual costs of police traffic protection.

702.03.11 Temporary and Interim Traffic Signal Systems

THE FOLLOWING SUBSECTION IS ADDED:

702.03.13 Image Detector Cable

Install image detector cable from existing image detectors to the control unit without splices. Furnished image detector cable shall be as recommended by the manufacturer of the existing image detector. Contractor shall verify the manufacturer of the existing image detector before ordering the image detector cable.

702.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
IMAGE DETECTOR CABLE	LINEAR FOOT

SECTION 704 – INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

704.03.01 General System (GS)

B. Installation.

1. Junction Box ITS.

THE ENTIRE TEXT IS CHANGED TO:

- a. Installation.** Excavate as specified in 202.03.02. Install junction boxes only in areas where the slope is not less than 22H: 1V. Place junction boxes on 10 inches of coarse aggregate No. 57. With each junction box, provide 6 coiling brackets, inserts and fasteners, and a ground rod and clamp. A ground rod is only required for locations where electrically conductive material is present. Backfill and compact using the directed method as specified in 203.03.02.D. Restore disturbed areas to the original conditions, the conditions specified in the Contract, or as directed by the RE.
- b. Relocation.** Submit plans showing the proposed method of relocation of junction box including any provisions for maintaining network operation and/or cut-over during the process to the RE for approval. Remove existing ITS junction box by excavating around the junction box, cutting back conduits, pulling

the cable slack equally to adjacent junction boxes and notching the portion of junction box below the conduits sufficient to slide the fiber optic cable. After removal of the junction box, re-couple the conduit(s), and terminate them using approved conduit repair kits and backfill with approved material and compact using the directed method as specified in 203.03.02.D. Install the Junction Box after approval by the RE. Ensure that the cut conduit ends are terminated at the entrance of the junction box wall using a manufacturer recommended kit depending upon the type of conduits. Ensure that the fiber optic cable is pulled back from the adjacent junction boxes in equal length to maintain the required slack for any immediate or future splicing.

THE FOLLOWING IS ADDED:

- 7. **ITS Conduits.** Install Rigid Nonmetallic Conduits as specified in 701.03.05 with the following exceptions:
 - a. Install a continuous tracer wire without any splice in the conduits and from junction box to a termination point in the controller cabinet.
 - b. Ensure that all conduits and ducts entering a junction box, foundation, cabinet, hub, or building are terminated based on manufacturer’s recommendation and are rodent proofed and sealed around cables, or plugged if conduit is built for future use.
 - c. Ensure that the ITS Conduits facilitate the various means of cable and wire installations including but not limited to pulling, jetting, and blowing of Fiber optic cable and electrical wires.

704.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
ITS CONDUITS, TYPE A, MODIFIED	LINEAR FOOT

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The Department will consider ITS CONDUITS, TYPE A, MODIFIED as a single conduit comprised of multiple individual conduits as shown in details and will make payment as one unit.

DIVISION 800 – LANDSCAPING

SECTION 802 – TRIMMING AND REMOVING TREES

802.03.02 Removing Existing Trees

THE FOLLOWING IS ADDED:

The Office of Landscape Architecture will inspect material in early Spring 2013 to determine which material will need to be removed due to death or decline from salt inundation. A list of locations of trees to be removed will be given to the Contractor as soon as the material has been evaluated.

SECTION 809 – MULCHING

809.02 MATERIALS

THE FOLLOWING IS ADDED:

Geotextile, Paving Fabric919.01

Provide a pre-emergent herbicide of oryzalin, oxadiazon, or trifluralin.

Provide a landscape weed barrier that is 100% polypropylene woven fabric, black in color, and a minimum weight of 2.5 ounces per square yard. Provide 12 inch staples of No. 25 plain iron wire for anchoring the landscape weed barrier.

Provide 3/8" nominal Quartzose Aggregate from a local quarry. Ensure that the color of the aggregate is a natural local blend of south New Jersey quartzose, obtained from one quarry. The Office of Landscape Architecture will provide the Contractor with a color sample to match and will approve color.

809.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

809.03.04 Stone Mulching

Excavate as specified in 202.03.03. Install all plant material prior to the installation of the landscape weed barrier in accordance with Section 811. Shape and compact the excavated area to produce a smooth surface. Apply pre-emergent herbicide to the area prior to the installation of the landscape weed barrier. Install the landscape weed barrier according to the Manufacturer's recommendations. Place a uniform layer of washed stone on the landscape weed barrier. Extend the landscape weed barrier halfway up the stone layer. Ensure that the elevation of the top of the stone mulch is approximately one half inch below the elevation of the adjacent pavement and curb.

SECTION 811 – PLANTING

811.01 DESCRIPTION

THE FOLLOWING IS ADDED TO THIS SUBPART:

This section also describes maintenance of existing trees and shrubs including trimming, furnishing and placing of fertilizer, and the general treatment for any major disease or insect infestation due to salt inundation and any other general maintenance.

811.02 MATERIALS

THE FOLLOWING IS ADDED:

For Tree Maintenance, use a 10-6-4, 50 percent organic fertilizer containing a minimum 10% nitrogen, 6% available phosphoric acid and 4% soluble potash. Ensure that each delivery of fertilizer is accompanied by a delivery slip showing the weight and a certified chemical analysis of the fertilizer composition.

Use pesticides and fungicides according to the recommendations for the treatment of the specific infestation found on the project. Ensure that each product meets the requirements of the manufacturer and is applied according to the manufacturer's recommendations.

For stone mulching, use an aggregate of 3/8" nominal Quartzose Aggregate from a local quarry. Ensure that the color of the aggregate is a natural local blend of south New Jersey quartzose, obtained from one quarry, and that it matches the aggregate used in the item Non-vegetative Surface, Porous Resin Bound Aggregate 2" Thick. The Office of Landscape Architecture will provide the Contractor with a color sample to match and will approve color.

Notify the RE and Office of Landscape Architecture 72 hours prior to performing tree maintenance work.

811.03.01 Planting

E. Excavation for Plant Pits and Beds.

THE LAST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

Obtain RE approval before reusing topsoil from the excavated pits.

I. Watering.

THE FIRST PARAGRAPH IS CHANGED TO:

Water plants with sufficient frequency and quantity to ensure that the soil surrounding the root system remains moist but not saturated.

THE FOLLOWING IS ADDED:

O. Tree Maintenance.

The Office of Landscape Architecture will inspect material in early Spring 2013 to determine which material will need to receive tree maintenance.

Water plants as per direction of the Office of Landscape Architecture or a certified tree expert if the plants show indication of stress due to salt inundation.

Trim existing trees in accordance with subsection 802.03.01.

Fertilize trees as per direction or supervision of a certified tree expert. Calculate the amount of fertilizer at a rate of three pounds (3 lb.) per inch of diameter breast height (DBH). Bore holes 1-1 1/2 feet deep, in concentric circles spaced 2 feet apart, beginning from the outer branch limit (dripline) to one-half the distance between the dripline and the trunk. Divide the fertilizer equally between all the holes and mix at a ratio of 1 part fertilizer to 2 parts topsoil. Place the mixture in the holes and tamp with a rod. Water the area thoroughly at a rate of 5 gallons per square yard of fertilized area immediately after fertilizing. Alternative methods of fertilization may be used with the approval of the RE.

Use a certified pesticide applicator for all pesticide and/or herbicide applications. Use pesticides and fungicides according to the recommendations for the treatment of the specific infestation found on the project. Ensure that each product meets the requirements of the manufacturer and is applied according to the manufacturer's recommendations

811.03.02 Plant Establishment Period

THE THIRD AND FOURTH PARAGRAPHS ARE CHANGED TO:

The Department will reinspect the plants annually for 3 years, beginning approximately 1 year after the start of the plant establishment period. If the Department determines that plants need to be replaced after each inspection, replant plants as specified in 811.03.01 within 3 weeks of notification. If replacing outside of the optimal planting season as specified in Table 811.03.01-1, only use containerized or balled and burlapped plants that are certified as being dug dormant.

2. Maintenance Bond.

Provide a bond to the Department in the amount of \$20,000.

811.04 MEASUREMENT AND PAYMENT
THE FOLLOWING ITEM IS ADDED:

Item
TREE MAINTENANCE

Pay Unit
LUMP SUM

DIVISION 900 – MATERIALS

SECTION 901 – AGGREGATES

901.11 SOIL AGGREGATE

1. Composition of Soil Aggregate.

THE FOLLOWING IS ADDED TO THE LAST PARAGRAPH:

For Designation I-14, the Contractor may use up to 30 percent steel slag by weight of the coarse aggregate portion of the soil aggregate. Obtain steel slag from a source listed on the QPL as specified in 901.01. Use steel slag that was produced as a co-product of the steel making process. Ensure that the steel slag consists of tough, durable pieces that are uniform in density and quality. Stockpile steel slag as specified in 901.02. Ensure steel slag for blending with I-14 Soil Aggregate does not exceed 0.50 percent expansion from hydration when tested according to ASTM D 4792.

SECTION 902 – ASPHALT

902.02.02 Composition of Mixtures

TABLE 902.02.02-2 IS CHANGED TO:

Table 902.02.02-2 Additional Fine Aggregate Requirements for HMA		
Tests	Test Method	Minimum Percent
Uncompacted Void Content of Fine Aggregate	AASHTO T 304, Method A	45
Sand Equivalent	AASHTO T 176	45

902.02.04 Sampling and Testing

B. Sampling.

THIS ENTIRE PART IS CHANGED TO:

The ME will take a random sample from each 700 tons of production for volumetric acceptance testing and to verify composition.. The ME will perform sampling according to AASHTO T 168, NJDOT B-2, or ASTM D 3665.

902.03.02 Mix Design

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will test 2 specimens to verify that the final JMF produces a mixture that has a minimum void content as specified in Table 902.03.03-1. The ME will determine percent air voids according to AASHTO T 209, and either NJDOT B-6 or AASHTO T 331.

902.03.03 Sampling and Testing

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material.

THE SECOND PARAGRAPH IS CHANGED TO:

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct air voids and draindown tests as directed by the ME.

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308 or NJDOT B-5. Perform testing for air voids according to AASHTO T 209 and either NJDOT B-6 or AASHTO T 331. Perform testing for draindown according to NJDOT B-7 or NJDOT B-8.

902.04.03 Sampling and Testing

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material. Maintain the temperature of the mix between 300 °F and 330 °F. Perform and meet requirements for quality control testing as specified in 902.02.04.C.

THE SECOND PARAGRAPH IS CHANGED TO:

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct draindown tests as directed by the ME.

902.05.01 Composition of Mixture

THE FIFTH PARAGRAPH IS CHANGED TO:

For fine aggregate, use stone sand conforming to 901.05.02. Ensure that the combined fine aggregate in the mixture conforms to the requirements in Table 902.02.02-2.

902.05.02 Mix Design

THE FIRST PARAGRAPH IS CHANGED TO:

Design the SMA to meet the requirements in Table 902.05.02-1 and Table 902.05.02-2. Prepare the JMF according to AASHTO R 46. Determine the JMF at 4 percent air voids and 75 gyrations of the Superpave gyratory compactor.

TABLE 902.05.02-2 IS CHANGED TO:

Table 902.05.02-2 SMA Mixtures Volumetrics For Design and Plant Production		
Property	Production Control Tolerances	Requirement
Air Voids	±1%	4.0%
Voids in Mineral Aggregate (VMA)	–	17.0% minimum
VCA _{mix}	–	Less than VCA _{dry}
Draindown @ production temperature	–	0.30% maximum
Asphalt Binder Content (NJDOT B-5)	±0.15%	6% minimum
Asphalt Binder Content (AASHTO T 308)	±0.40%	6% minimum
Tensile Strength Ratio (AASHTO T 283)	–	80% minimum

902.05.03 Sampling and Testing

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material.

THE SECOND PARAGRAPH IS CHANGED TO:

During production at the plant, the ME will take a sample from each 700 tons of production to verify composition and air voids. Conduct draindown, VCA_{mix}, VCA_{dry}, and VMA testing as directed by the ME. Perform tests according to AASHTO R 46.

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308, or NJDOT B-5. The ME will determine bulk specific gravity of the compacted sample according to AASHTO T 166 or AASHTO T 331. The ME will use the most current QC maximum specific gravity test result, obtained according to AASHTO T 209, in calculating the volumetric properties of the SMA. Perform testing for draindown according to AASHTO T 305.

902.06.03 Sampling and Testing

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that the mix meets the requirements as specified in 902.02.04.A, except that the temperature of the mix at discharge is required to be between 230 °F and 275 °F, otherwise the RE or ME will reject the material.

THE SECOND PARAGRAPH IS CHANGED TO:

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct draindown tests as directed by the ME.

SECTION 903 – CONCRETE

903.03.06 Tables

Table 903.03.06-2 Requirements for Structural Concrete Items

THE SEVENTH LINE UNDER CAST-IN-PLACE ITEMS IS CHANGED TO:

Table 903.03.06-2 Requirements for Structural Concrete Items				
	Concrete Class	Slump¹ (inches)	Percent Air Entrainment for Coarse Aggregate¹	
			No. 57 & No. 67	No. 8
Decks, Sidewalks, Curbs, Parapets, Concrete Patch	A	3 ± 1	6.0 ± 1.5	7.0 ± 1.5

903.05.04 Control and Acceptance Testing Requirements

THE SUPERScript REFERENCE NO. 4 UNDER TABLE 903.05.04-1 IS CHANGED TO:

4. For chloride permeability testing, the ME will mold 4 additional cylinders, taking 2 cylinders each from 2 randomly selected delivery trucks for testing at 56-days.

THE FOURTH PARAGRAPH IS CHANGED TO:

If, upon testing at 56 days, 1 or more individual test results exceed 2000 coulombs, the RE may:

1. Require that the Contractor remove and replace the defective lot, or
2. Allow the Contractor to submit a corrective action plan for approval.

SECTION 905 – REINFORCEMENT METALS

905.01.03 Welded Wire Reinforcement

THE SECOND PARAGRAPH IS CHANGED TO:

When approved as an alternate to galvanized reinforcement bars, use galvanized welded wire reinforcement that meets the requirements of ASTM A 641, Table 1, Class 1.

SECTION 911 – SIGNS, SIGN SUPPORTS, AND DELINEATORS

911.02.02 Breakaway Sign Supports for Ground Mounted Signs

THE ENTIRE SUBPART IS CHANGED TO:

Fabricate and construct breakaway sign supports for ground mounted signs using materials conforming to the requirements in Table 911.02.02-1.

Table 911.02.02-1 Materials for Breakaway Sign Supports			
Item	Test Method	Type or Grade	Galvanizing
Aluminum Materials (other than bracket)	911.01.01		
Bracket	B308	6061-T6	
Structural steel shapes	ASTM A709	Grade 36	ASTM A123
Steel Sheet	ASTM A1011	Grade 36	ASTM A 653
Bolts (except special bolt for coupling)	ASTM A325		ASTM A153
Special bolt for coupling	ASTM A449		ASTM A153
Cap Screw	ASTM A307		ASTM A153
Lock Washer	ANSI B18-21-1		ASTM A153
Nut	ASTM A563	Grade DH	ASTM A153
Coupling	AMS 6378 F		ASTM A153
Steel Hinge Plate	AISI 4130		ASTM 123
Anchor Rod	AISI 1045		
Anchor Coil	AISI 1008		
Anchor Washer	908.04		
Anchor Ferrule	908.04		

Submit mill certificates for the component materials.

911.02.03 Non-Breakaway Sign Supports for Ground Mounted Signs

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911.03 FLEXIBLE DELINEATORS

1. Delineator Dimensions.

b. Guide Rail Mounted.

THE ENTIRE TEXT IS CHANGED TO:

Ensure that the unit for beam guide rail mounted flexible delineators has a minimum width of 3 inches and a minimum thickness of 0.100 inch. Use units of a height that will ensure that the top of the reflective area is 5 ± 2 inches above the top of post.

Design the base of the unit to mount over the I-beam blockout or to the top of a wood or synthetic blockout, of the beam guide rail.

THE FOLLOWING IS ADDED:

- d. Construction Barrier Curb Mounted.** For construction barrier curb top mounted flexible delineators, use a delineator that is 6 x 12 inches with a minimum thickness of 0.100 inch. For construction barrier curb side mounted flexible delineators, use a delineator that is 3-1/2 x 3-1/2 inches with a minimum thickness of 0.100 inch, and that has a base that forms a “T” shape with the panel for mounting on the barrier curb and is flexible or hinged so as to return to its original position after being struck.

4. Retroreflective Sheeting.

b. Guide Rail Mounted.

THE ENTIRE TEXT IS CHANGED TO:

Ensure that the sheeting is a minimum of 3 inches square and is mounted on the upper portion of the delineator.

THE FOLLOWING IS ADDED:

- d. Construction Barrier Curb Mounted.** Ensure that the sheeting for top mounted flexible delineators is 6 x 12 inches and the sheeting for side mounted flexible delineators is 3-1/2 x 3-1/2 inches.

Submit a certification of compliance, as specified in 106.07, for delineators.

SECTION 912 – PAINTS, COATINGS, TRAFFIC STRIPES, AND TRAFFIC MARKINGS

912.03.01 Epoxy Traffic Stripes

B. Glass Beads.

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 200 ppm of arsenic.

912.03.02 Thermoplastic Traffic Markings

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 200 ppm of arsenic.

912.04.01 Latex Paint

THE FOLLOWING IS ADDED TO THE SECOND PARAGRAPH:

Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 200 ppm of arsenic.

SECTION 916 – FIBERGLASS COMPOSITE MATERIALS

THE FOLLOWING SUBSECTION IS ADDED:

916.04 FIBERGLASS PIPE PILES

Provide fiberglass pipe piles (FPP) consisting of a hollow fiberglass tube that can be driven to plan requirements and can remain unfilled or be filled after being driven with concrete class “A”. Ensure that the FPP conforms to the following material properties prior to being filled with concrete:

1. **Composite Tubes.** Produce composite tubes of composite fiber reinforced polymer materials that have been formed by means of pultrusion, filament winding, or resin infusion molding processes. In the shell, incorporate E-Glass or other continuous fiber reinforcement that is impregnated with vinyl ester, polyester, or epoxy resin. Ensure that the wall is 50 to 70 percent glass with a minimum of 25 percent resin by weight.

Ensure that the tubes to be used in the FPP provide sufficient cross-section and strength to withstand stresses incurred during fabrication, handling, and driving of the piles to the required resistance.

Manufacture the composite tubes according to the tolerances specified in Table 916.04-1.

Table 916.04-1 Tolerances for Composite Tubes	
Property	Tolerance
Minimum Length	+1 foot, -0 inches
Maximum Sweep ¹	0.08% of total length
Ends out of Square	1.0% of diameter

¹ Sweep is the deviation from straightness, measured at several points around the pile circumference while the pile is not subjected to bending stresses.

In the manufacture of composite tubes, use fiberglass products specified in [Table 916.04-2](#) and conforming ASTM D 2310 or ASTM D 2996. Include an ultraviolet inhibitor in the fiberglass resin.

Table 916.04-2 Requirements for Fiberglass Tubes	
Class	RTRP (reinforced thermosetting resin pipe)
Type	Type I (filament wound)
Grade	Grade 1 (glass fiber reinforced epoxy resin pipe) Grade 2 (glass fiber reinforced polyester resin pipe), or vinylester resin

Manufacture fiberglass tubes to conform to the physical properties specified in [Table 916.04-3](#).

Table 916.04-3 Physical Properties of Fiberglass Tube			Nominal Tube Diameter	
	Stress Direction	Test Method	12-inch	16-inch
Elastic Moduli (ksi)	axial-compression	ASTM D 2105	2,900	3,000
Strength (ksi)	axial-tensile	ASTM D 638	40	40
	axial-compressive	ASTM D 6641/ D 695 ¹	40	40
	Flexural	ASTM D 790	52	58
Stiffness EI (kip-in ²)		ASTM D 6109	670,420	2,190,000
Allowable Moment (kip-ft)			60	150
Moment of Inertia (in ⁴)			232	730
Section Modulus (in ³)			38.6	91.5
Wall thickness			0.375	0.5

¹ Modify ASTM D 695 as follows:

^{1.1} Test Specimen Dimensions: Diameter is equal to full diameter of tube being tested and Height is equal to 1 inch.

^{1.2} Do not use the compression tool described in ASTM D 695. Center the specimen in the compression testing machine and place a steel plate on top of the specimen to distribute the load from the test machine.

2. **Coating.** Apply an ultraviolet resistant film coating of a minimum 3-mil thickness to portions of piles remaining exposed after installation. Use a coating that has a permanent color of gray or black.
3. **Allowable Degradation.** Ensure that the total ultraviolet resistance provided by resin inhibitors and color film is sufficient to limit the loss of properties as specified in [Table 916.04-4](#). Conduct exposure testing according to one of the following ASTM methods: G 152, G 155, G 154, or B 117.

Table 916.04-4 Allowable Degradation of Coated Composite Tube ¹		
Property	Test Method	Maximum Allowable Loss
Axial Tensile Strength Loss	ASTM D 2105	10%
Axial Compressive Strength Loss	ASTM D 695 ²	10%
Hoop Tensile Strength Loss	ASTM D 1599	10%
Color Film Adhesion Loss	ASTM D 4541	10%

¹ After exposure to light and salt spray for a duration of 3600 hours

² Modify ASTM D 695 as follows:

^{2.1} Test Specimen Dimensions: Diameter is equal to full diameter of tube being tested and Height is equal to 1

inch.

^{2.2} Do not use the compression tool described in ASTM D 695. Center the specimen in the compression testing machine and place a steel plate on top of the specimen to distribute the load from the test machine.

4. **Dimensional and Physical Stability.** Ensure that the dimensional and physical stability of materials used in the manufacture of composite piles conforms to the evaluation criteria of ASTM D 696.
5. **Concrete.** For infilling of FPP, use Class A concrete as specified in 903.03 to the required depth as designated on construction plans. In addition, use a composite tube with a textured inside surface, a chemical bonding agent, or shrinkage compensating concrete to establish a positive connection between the composite tube and concrete core to ensure composite action.
6. **Ultimate Flexural Strength.** Ensure that the ultimate flexural strength value for a 12-inch nominal dimension FCCP is at least 1900 inch-kips. For design of cyclically loaded bridge pier protection applications, assume an ultimate flexural strength value for the FCCP of 1400 inch-kips.

Submit a certification of compliance, as specified in 106.07, with the test results for the fiberglass composite material properties and the concrete infill compressive strengths of the FPP attached.

THE FOLLOWING SUBSECTION IS ADDED:

916.05 FIBERGLASS SHEETING

Provide materials conforming to the requirements in Table 916.05-1 and Table 916.05-2 or as shown on the Plans. The sheeting material shall be engineered composite material from a resin and fiber matrix having minimum physical and mechanical properties as detailed in Table 916.05-1 and Table 916.05-2 respectively. Sheeting profile shall be manufactured with an interlocking feature that ensures adjacent panels maintain alignment. The sheeting shall be free from visible cracks and other adverse defects pre and post-installation.

Table 916.05-1 Physical Properties of Fiberglass Sheeting	
Properties	Values
Min. Depth of Section (in)	8.0
Min. Effective Width of Section (in)	18.0
Weight (lbs/ft ²)	3.22
Flange Thickness (in)	0.3
Web Thickness (in)	0.4
Moment of Inertia (in ⁴ /ft)	52
Section Modulus (in ³ /ft)	8.0
Webs Per Foot of Wall	1.5
Profile/Patented Features	Z-Profile

Table 916.05-2 Mechanical Properties of Fiberglass Sheeting		
Properties	Values	Test Method
Allowable Bending Moment (ft-lb/ft)	9,000	-
Allowable Shear Strength (lbs/ft)	20,000	-
Average Modulus of Elasticity (lbs/in ²)	3,200,000	-
Tensile Modulus (lbs/in ²)	1,500,000	ASTM D 638
Compression Modulus (lbs/in ²)	1,500,000	ASTM D 6641/D 695
Allowable Tensile Strength (lbs/in ²)	10,000	ASTM D 638
Allowable Compression Strength (lbs/in ²)	25,000	ASTM D 6641/D 695

Web Buckling Capacity (lbs/ft)	2,400	ASTM D 2790
In-Plane Shear Strength (lbs/in ²)	5,000	ASTM D 5379

Resins shall be high performance, exhibiting low water absorption, high UV resistance, high heat distortion temperatures, high elongation as well as high impact strength.

SECTION 917 – LANDSCAPING MATERIALS

917.05 SEED MIXTURES

917.05.01 Grass Seed Mixtures

REPLACE TABLE 917.05.01-4 TYPE B GRASS SEED MIXTURE WITH THE FOLLOWING:

Table 917.05.01-4 Type B Grass Seed Mixture			
Kind of Seed	Minimum Purity, Percent	Minimum Germination, Percent	Percent of Total Weight of Mixture
Redtop	92	85	10
Red Fescues (Creeping or Chewings)	95	80	55
Blackwells Switchgrass	95	85	15
Perennial Ryegrass	98	85	5
Kentucky 31	95	80	15

SECTION 918 – ELECTRICAL MATERIALS

918.12 PEDESTALS, POLES, TRANSFORMER BASES, AND MAST BRACKET ARMS

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate pedestals, poles, transformer bases, and mast bracket arms for traffic signal, highway lighting, and camera standards with materials according to the appropriate ASTM standard and the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

DIVISION 1000 – EQUIPMENT

SECTION 1009 – HMA PLANT EQUIPMENT

1009.01 HMA PLANT

A. Requirements for HMA Mixing Plants.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

The HMA producer is required to have a quality control (QC) program plan approved annually by the ME as per Materials Approval Procedure MAP-102. The HMA producer is required to ensure that the QC plan conforms to the requirements outlined in the report entitled “Hot Mix Asphalt Quality Control Program Plan” prepared by the Department of Transportation and New Jersey Asphalt Paving Association. Failure to follow these requirements will result in rejection of HMA materials supplied by the HMA producer and removal of the HMA supplier from the QPL.

NJDOT TEST METHODS

NJDOT R-1 – OPERATING INERTIAL PROFILER SYSTEMS FOR EVALUATING PAVEMENT PROFILES

THIS ENTIRE TEST METHOD IS CHANGED TO:

- A. Scope.** This test method describes the procedure for operating, verifying the calibration of an ASTM E 950 Class 1 Inertial Profiler System (IPS) and testing riding surface for pavement profiles evaluation.
- B. Apparatus.** Use an IPS that meets the requirements of AASHTO M 328 and ASTM E 950, Class 1 and the following:
1. Certify the IPS according to AASHTO R 56 at least every 2 years. If a system component is replaced, re-certify the system. Perform the certification at a site approved by the Department.
 2. The data system provides the raw profile data in an ASCII format acceptable to the Department.
 3. The computer program uses a high-pass filter set at 300 feet and reads an ASCII or text file for computing the International Roughness Index (IRI) in inches per mile.
 4. The current version of *ROADRUF*, *ProVal*, or other Department approved pavement profile analysis software is used to compute the IRI.
- C. Procedure.** Perform the following steps:
1. Operate the IPS according to AASHTO R 57 and ASTM E 950.
 2. On a daily basis before data collection, check the equipment and operating system for operational stability and calibration. Perform necessary calibration procedures according to equipment manufacturer's procedures and applicable standards. Operators shall maintain a log documenting the calibration history.
 3. Ensure that the operators of the IPS have completed a profile training course, such as NHI Course 131100, have been trained specifically on the IPS they will be operating, and are proficient in the operation of the IPS.
 4. Make provisions to automatically start and stop the IPS recording at the beginning and end of testing.
 5. Ensure retroreflective traffic striping tape or other approved mechanism is placed at the beginning and end of each direction of travel for automatically triggering the start and stop of profile measurements.
 6. Collect at least 0.05-mile of data before the area to be tested to allow the system to stabilize before profile measurements are obtained. Collect data in a continuous run through the length to be tested. If the run is interrupted, discard the results and re-run the length.
 7. Test the full extent of each wheel path of each lane in the longitudinal direction of travel. The wheel path is defined as being located approximately 3 feet on each side of the centerline of the lane and extending for the full length of the lane. Lanes are defined by striping.
 8. Run three tests each wheel path and report average of three runs each wheel path.
 9. Exclude locations where the traffic striping includes turn lanes that cause the through traffic lane to cross over a longitudinally paved joint, ramps, and lanes such as acceleration and deceleration lanes of less than 1,000 feet of continuous through treatment.
 10. Report single IRI value average of 3 runs unless otherwise directed. The single IRI value shall be each 0.01 mile length for each lane, ramp, and shoulder and 0.005 mile for each overlaid bridge structure.

FHWA ATTACHMENT NO. 1

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Government wide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, 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.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

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

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

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 minorities and women 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 minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 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, 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 their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts

should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of 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, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with

Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

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

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The

employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing

work in the classification under this contract from the first day on which work is performed in the classification.

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

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so 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 contracting agency 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of

trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be

permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. 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 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased 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 subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 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. 3704).

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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 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, Form FHWA-1022 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:

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 under this title or imprisoned not more than 5 years or both."

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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered

Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from

participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment 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;

(3) 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 (a)(2) of this certification; and

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

b. Where the prospective 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 Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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 Participants:

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 participating in covered transactions 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.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is 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 its bid or proposal that the participant 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 AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

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 the participant 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, the participant 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 one 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 provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. 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.

FHWA ATTACHMENT NO. 2

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 action 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 therefore, 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 media, 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.

FHWA ATTACHMENT NO. 3

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

COUNTY	MINORITY PARTICIPATION PERCENT	FEMALE PARTICIPATION PERCENT
Atlantic	18.2	6.9
Bergen	15	6.9
Burlington	17.3	6.9
Camden	17.3	6.9
Cape May	14.5	6.9
Cumberland	16	6.9
Essex	17.3	6.9
Gloucester	17.3	6.9
Hudson	12.8	6.9
Hunterdon	17	6.9
Mercer	16.4	6.9
Middlesex	15	6.9
Monmouth	9.5	6.9
Morris	17.3	6.9
Ocean	17	6.9
Passaic	12.9	6.9
Salem	12.3	6.9
Somerset	17.3	6.9
Sussex	17	6.9
Union	17.3	6.9
Warren	1.6	6.9

FHWA ATTACHMENT NO. 4

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 thereunto, 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 Division of Civil Rights/Affirmative Action 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 or 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 Division of Civil Rights/Affirmative Action, 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.
- d. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;
- e. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;
- f. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and
- g. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

The notices referred to in paragraphs a and c may be obtained at the preconstruction conference.

FHWA ATTACHMENT NO. 5

DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION ATTACHMENT FHWA FUNDED CONTRACTS

I UTILIZATION OF DISADVANTAGED BUSINESSES AS CONTRACTORS, MATERIAL 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 NJDOT that Disadvantaged Business Enterprises, as defined in 49 CFR, Part 26; Titles I & V of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA); the Transportation Equity Act for the 21st Century (TEA-21); and Section V, Part B below, shall have equal opportunity to participate in the performance of contracts financed in whole or in part with federal funds under this agreement. Consequently, the DBE requirements of 49 CFR, Part 26, Subsections A, C and F apply to this agreement.

III CONTRACTOR'S DBE OBLIGATION

The NJDOT and its Contractor agree that Disadvantaged Business Enterprises, as defined in 49 CFR Part 26, Subpart A; and in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21), and Section V, Part B below, have equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with federal funds provided under this agreement. In this regard, the NJDOT and all Contractors shall take all necessary and reasonable steps in accordance with 49 CFR, Part 26 to ensure that Disadvantaged Businesses are given equal opportunity to compete for and to perform on NJDOT federally funded contracts. The NJDOT and its Contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of USDOT assisted contracts.

IV COMPLIANCE

To signify and affirm compliance with the provisions of this attachment, the bidder shall complete the Schedule of DBE Participation (Form CR-266F) included in the bid package and all forms and documents required in Sections VII and VIII of these provisions which will be made a part of the resulting contract.

V GOALS FOR THIS PROJECT

- A. This Project includes a goal of awarding 12 percent of the total contract value to subcontractors, equipment lessors and/or material suppliers that qualify as Disadvantaged Business Enterprises (DBEs).
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, a Disadvantaged Business Enterprise Directory is available from the Division of Civil Rights and Affirmative Action. Use of this listing does not relieve the Contractor of their responsibility to seek out other DBE's not listed, prior to bid. If a contractor proposes to use a DBE contractor not listed in the DBE Directory, the proposed DBE firm must submit a completed certification application to the Division of Civil Rights and Affirmative Action, fifteen (15) days prior to bid date.

B. DEFINITIONS

1. Disadvantaged Business Enterprise is a firm, "Owned and controlled" by socially and economically disadvantaged individuals that is also a small business concern, as defined pursuant to Section 3 of the Small Business Act and Small Business Administration Regulations (13 CFR, Part 121) which also does not exceed the revenue cap on averaged annual gross receipts applicable to the firm's particular Standard Industrial Classification (SIC Code).
2. Owned and Controlled is defined as a firm which is at least fifty-one (51%) percent owned by one or more disadvantaged individuals, or in the case of a publicly owned business, at least fifty-one (51%) percent of the stock is owned by one or more disadvantaged individuals, and whose management and daily business operations are controlled by one or more such individuals.
3. Any individual in one of the following groups who is also a U.S. Citizen or lawfully admitted permanent resident presumed to be socially and economically disadvantaged under the DBE Program.
 - (a) Black Americans – includes any persons having origins in any of the black racial groups of Africa;
 - (b) Hispanic Americans - includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture; or origin, regardless of race;
 - (c) Native American - includes persons who are American Indians, Eskimos, Aleuts or Native Hawaiians;
 - (d) Asian-Pacific Americans - includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau) the Commonwealth of the Northern Mariana Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia or Hong Kong;
 - (e) Subcontinent Asian Americans - includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - (f) Women - regardless of race;
 - (g) Other - Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration, at such time as the SBA designation becomes effective; or a determination made by the NJDOT's Division of Civil Rights and Affirmative Action, on a case-by-case basis;

VI COUNTING DBE PARTICIPATION

- A. Each DBE is subject to a certification procedure to ensure its DBE eligibility status prior to award of contract. In order to facilitate this process it is advisable for the bidder to furnish the names of proposed DBE's to the Department fifteen (15) days before bid opening. Once a firm is determined to be a bona fide DBE by the Division of Civil Rights and Affirmative Action, the total dollar value of the contract awarded to the DBE is counted toward the applicable DBE goal.
- B. The Contractor may count toward its DBE goal only expenditures to DBE's that perform a commercially useful function in the work of a contract. A DBE 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 a DBE is performing a commercially useful function, the Contractor shall evaluate the amount of work subcontracted, industry practice and other relevant factors.
- C. If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own workforce, or the DBE 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 DBE, payments made to the Contractor for work performed by the Contractor will be applied toward the DBE goal. Payments made to the Contractor for work performed by non-DBE's will not be applied toward the goal.
- E. The prime Contractor may count 60 percent of its expenditures to DBE suppliers who are not Manufacturers, provided that the DBE supplier performs a commercially useful function in the supply process. The contractor may count 100% of its expenditure to DBE suppliers who are also manufacturers. Manufacturers receive 100% credit toward the DBE goal.
- F. When a DBE subcontractor sublets part of the work of its contract to another firm, the value of the subcontract work may be counted towards the DBE goals only if the subcontractor itself is a DBE. Work that a DBE subcontractor subcontracts to a non-DBE firm, does not count toward DBE goals.

VII GOOD FAITH EFFORT

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

- A. Attendance at a pre-bid meeting, if any, scheduled by the Department to inform DBE's of subcontracting opportunities under a given solicitation.
- B. Advertisement in general circulation media, trade association publications, as well as minority-focus media 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 DBE's that their interest in the contract is solicited;
- D. Efforts made to select portions of the work proposed to be performed by DBEs in order to increase the likelihood of achieving the stated goal;
- E. Efforts made to negotiate with DBE's for specific sub-bids including at a minimum:
 - 1. The names, addresses and telephone numbers of DBE's that were contacted;
 - 2. A description of the information provided to DBE's regarding the plans and Specifications for portions of the work to be performed; and
 - 3. A statement of why additional agreements with DBE's were not reached;
- F. Information regarding each DBE the bidder contacted and rejected as unqualified and the reasons for the bidder's conclusion;
- G. Efforts made to assist the DBE in obtaining bonding or insurance required by the Bidder or the Department.

NOTE: If the Division of Civil Rights and 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 administrative consideration 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.

VIII AFFIRMATIVE ACTION PLANS

- A. General contractors are required to submit their firm's Affirmative Action Program annually to the Division of Civil Rights and Affirmative Action. Until such time as these programs are submitted and approved, Contractors must have their programs in the Division of Civil Rights and Affirmative Action no later than seven (7) State business days after the date of receipt of bids.
- B. This program will include, but is not limited to the following:
 - 1. The name of the Contractor's D/ESBE Liaison Officer to administer the firm's Disadvantaged Business Program.

2. An explanation of the affirmative action methods used in seeking out and considering Disadvantaged Business Enterprises as subcontractors, material suppliers or equipment lessors.
 3. An explanation of affirmative action methods intended to be used in seeking out and considering Disadvantaged Business Enterprises as subcontractors, material suppliers or equipment lessors. This refers to the Contractor's ongoing responsibility, i.e., Disadvantaged Business Enterprise/Affirmative Action activities after the award of the contract and for the duration of said project.
- C. 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. DBE Form CR-266F- Schedule of DBE Participation. List all DBE's participating in the contract listing the scope of work, dollar value and percent of total contract to be performed.
 2. Supplement to DBE Form CR-266F - A list of all subcontractors who submitted bids or quotes on this project.
 3. 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 VII 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 and Affirmative Action.

IX AFFIRMATIVE ACTION 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 affirmative action:

1. To notify the RE, in writing, of the type and approximate value of the work which the Contractor intends to accomplish by such subcontract, purchase order or lease.
2. To signify and affirm compliance with the provisions of this Section, the Contractor shall submit the Post-Award DBE Certification Form to the Regional Supervising Engineer with his application to sublet or prior to purchasing material or leasing equipment. Post Award DBE forms may be obtained from the RE.
3. To give disadvantaged firms equal consideration with non-minority firms in negotiation for any subcontracts, purchase orders or leases.
4. If a prime contractor fails to meet its original DBE obligation, they must request an exemption to the goal following criteria in Section VIII (C)(4) and provide a good faith effort thereof. This request must include a written statement addressing each of the Good Faith Efforts outlined in Section VII, A-G.

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 RE 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 disadvantaged.
- B. Efforts made to identify and retain a Disadvantaged Business Enterprise as a substitution subcontractor when the arrangements with the original DBE proved unsuccessful, shall be submitted in writing to the Department's D/ESBE Liaison Officer 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 RE. Said termination notice will include the subcontractor's ethnic classification and reason for termination.

XII CONCILIATION

In cases of alleged discrimination regarding these DBE provisions and guidelines, an investigation will be undertaken by the Federal Office of Contract Compliance in conjunction with the Division of Civil Rights and 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 judgment 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 Disadvantaged Business Enterprise Utilization obligations. The records kept by the Contractor will be designed to indicate:
1. The names of disadvantaged subcontractors, equipment lessors and material suppliers contacted for work on this project.
 2. The type of work to be done, materials to be utilized or services to be performed other than the work of the prime contractor on the project.
 3. The actual dollar value of work subcontracted and awarded to DBE's.
 4. The progress being made and efforts taken in seeking out and utilizing Disadvantaged Business Enterprises. This would include solicitations, quotes and bids regarding project work items, supplies, leases, etc.
 5. Documentation of all correspondence, contacts, telephone calls, etc., to obtain the services of Disadvantaged Business Enterprises on this project.
 6. Records of all DBE's and non-DBEs 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 Disadvantaged Business Enterprises 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 the Specifications.

XV NON-COMPLIANCE

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

FHWA ATTACHMENT NO. 5 (A)

INCENTIVE PROGRAM DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION ATTACHMENT FOR FHWA FUNDED CONTRACTS

I PURPOSE.

To ensure that certified Disadvantaged Business Enterprises (DBE's), as defined in 49 CFR Part 26, have the maximum opportunity to compete for and perform on Department construction projects.

II INTENT.

To encourage prime contractors to utilize the services of DBE's who have not previously been prime contractors or subcontractors on Department projects, and afford DBE's the opportunity to again experience in Department construction contract work.

III ELIGIBILITY.

Only prime contractors and DBE's certified prior to the date of bid, or prospective DBE's that have submitted to the Division of Civil Rights/Affirmative Action on or before the day of bid a completed "New Jersey Department of Transportation Disadvantaged Business Enterprise Disclosure Affidavit" (PR-131) and all required documentation and have never been either prime contractor or subcontractor on Department construction projects will be eligible for participation in this program. A list of those eligible DBE's will be available from the Division of Civil Rights/Affirmative Action. Any bidder who submits the name of a certified first-time DBE as part of its goal commitment is also eligible. Any DBE participating in the program must submit to the prime contractor a certification that they have never been either a prime contractor or subcontractor on a Department construction project under their present name or any other name. The prime contractor shall submit this certification with their required DBE submission.

IV INCENTIVE.

Prime contractors utilizing first-time DBE's will be given a credit toward their goal percentage identified in companion document "*Disadvantaged Business Enterprise Utilization Attachment For FHWA Funded Contracts*", dated September 1987, revised January 1989, September 1992 and May 1995, equal to the actual dollar amount subcontracted to a first time DBE with the total project credit limited to two percent (2%) of the total bid price but not to exceed \$200,000. This extra credit will reduce the goal percentage award as well as be applicable to the reduced goal percentage.

V PROGRAM REQUIREMENTS.

- A. A prime contractor may present any number of first time DBE's for each project. Credit will be given only for the actual amount subcontracted up to the limits established in IV above.
- B. The prime contractor shall be responsible for the entire DBE goal percentage established for the project.
- C. Failure to use a first time DBE shall cause the original goal award percentage prior to applying first time DBE credits to remain in effect.
- D. Failure to meet the goal award percentage, coupled with a lack of good faith effort as determined by the Division of Civil Rights/Affirmative Action, will be considered to be non-compliance on the part of the prime contractor who may be placed in show cause and subsequently be grounds for rejection of the bid as nonresponsive.

FHWA ATTACHMENT NO.6

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 journey people 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 TRAINEES. TRAINEE HOURS= 7,740.

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 RE 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 RE, 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." (Form CR-1) 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 RE 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" (Form CR-3), showing hours of training satisfactorily completed.
 - (2) The Contractor shall maintain and submit an accurate and complete "NJDOT Contractor's 1409 Quarterly Training Report" (Form-CR-1409) to the RE 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" (Form CR-2) to the RE, 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 RE 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 journey person 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 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 must submit monthly employment and wage data to the Department via a web based application using electronic Form CC-257R. Instructions for registering and receiving the authentication code to access the web based application can be found at:

<http://www.state.nj.us/transportation/business/civilrights/pdf/cc257.pdf>

Instructions on how to complete Form CC257 are provided in the web application. Submit Form CC-257R through the web based application within 10 days following the end of the reporting month. Submission of this form also satisfies the requirement of the form FHWA 1391.

All employment and wage data must be accurate and consistent with the certified payroll records. The contractor is responsible for ensuring that their subcontractors comply with these reporting requirements. Failure by the contractor to submit Monthly Employment Utilization Report may impact the contractor's prequalification rating with the Department.

FHWA ATTACHMENT NO.7

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 persons 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.

PLAN SHEETS AND BORING LOGS FOR THIS CONTRACT
ARE NOT REPRINTED HERE DUE TO SIZE.