Meadowlands Adaptive Signal System for Traffic Reduction

MASSTR

Phase Five
Bid Package

TIGER 2

October 2014

Prepared By

New Jersey Meadowlands Commission

P.O. Box 640, One DeKorte Park Plaza, Lyndhurst New Jersey 07071

www.njmeadowlands.gov

David Liebgold
New Jersey Professional Engineer
License Number GE 45897

Hong Yuan
New Jersey Professional Engineer
License Number GE 48481

Leomar Almanzar
New Jersey Professional Engineer
License Number GE 48348

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
	ADVERTISEMENT FOR BIDS	3
	PROJECT OVERVIEW	4
1.0	DEFINITION AND TERMS	6
2.0	CONTRACT DOCUMENTS EXAMINATION	7
3.0	INTERPRETATION OF QUANTITIES	7
4.0	IF AND WHERE DIRECTED	7
5.0	BID BOND AND BONDING REQUIREMENTS	7
6.0	PUBLIC OPENING OF BIDS	8
7.0	BALANCED BIDS	8
8.0	EVALUATION OF BIDS	8
9.0	INTERPRETATION AND ADDENDA	9
10.0	DISQULIFICATION OF BIDDERS	10
11.0	REJECTION OF BIDS	10
12.0	CONSENT OF SURETY	11
13.0	BONDS	11
14.0	AWARD OF CONTRACT	11
15.0	SUBCONTRACTOR	12
16.0	DISADVANTAGE BUSINESS ENTERPRISE	12
17.0	SUBSTITUTE FOR PROPRIETARY ITEMS	15
18.0	APPLICABLE LAWS	17
19.0	EQUAL EMPLOYMENT OPPRTUNITY	21
20.0	CONTRACT TIME	25
21.0	PAYMENTS, INSPECTION, AND COMPLETION	25
22.0	WORK CONDITIONS	28
23.0	MATERIAL CHANGES IN THE SCOPE OF WORK	30
24.0	SUSPENSION OF WORK AND TERMINATION	30
25.0	CONTRACTOR'S COMPLIANCE	32
26.0	PREVAILING WAGE ACT	34
27.0	INSURANCE	35
28.0	NJMC RIGHT TO DEDUCT MONIES	36
29.0	FINANCIAL RECORDS	36
30.0	ETHICS STANDARDS	36
31.0	AMERICANS WITH DISABILITY ACT	36
32.0	STOCKHOLDER DISCLOSURE	36
33.0	BUSINESS REGISTRATION	37
34.0	THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT	37

TABLE OF CONTENTS (CONTINUED)

DESCRIPTION	PAGE
BID DOCUMENT CHECKLIST	38
BID FORM	39
BID BOND	43
CONSENT OF SURETY	45
ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA	46
AFFIRMATIVE ACTION COMPLIANCE	47
DISADVANTAGE BUSINESS ENTERPRISE (DBE)	48
OWNERSHIP DISCLOSURE	49
DISCLOSURE OF LOBBYING ACTIVITIES	54
NON-COLLUSION AFFIDAVIT	56
CORPORATE RESOLUTION FORM	57
AFFIDAVIT OF AUTHORIZATION	58
MORAL INTEGRITY AFFIDAVIT	59
SET-OFF FOR STATE TAX FORM	61
EXPERIENCE AFFIDAVIT	62
SUBCONTRACTOR USE FORM	63
NJ MACBRIDE PRINCIPLES FORM	64

APPENDICES

Appendix A. CONTRACT DOCUMENTS

Appendix B. NJMC SPECIFICATIONS

Appendix C. NJDOT SPECIFICATIONS

Appendix D. SAMPLE FIBER-OPTIC CABLE ASSIGNMENTS AND TERMINATIONS

Appendix E. FORM FHWA 1273

Appendix F. DAVIS-BACON WAGE RATES

Appendix G. CONSTRUCTION PLANS

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

ADVERTISEMENT FOR BIDS

Notice is hereby given that sealed BIDS will be received by the New Jersey Meadowlands Commission (NJMC), P.O. Box 640, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071 for the following:

MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION
PHASE FIVE CONSTRUCTION

BIDS must be submitted in the Bid Form contained in the Contract Documents and must be enclosed in a sealed envelope plainly marked on the outside with the name of project and the name of Bidder. BIDS will be received at the above address until 10:00 AM prevailing time, on **Monday, October 20, 2014**. BIDS will **not** be accepted after 10:00 AM on that day. BIDS will be opened at this date and time in a public forum at the above address.

Contract Documents (specifications and plans) will be available for review at the NJMC offices starting on **Friday, October 3, 2014, after 10:00 AM**. Official signed and sealed copies of the Bid Package may be obtained at the NJMC Offices upon payment of the non-refundable fee for each set of $150.00. Checks shall be made payable to the "NJMC". BIDS will only be accepted from those who obtain an official Bid Package. Electronic copies of the Bid Package may be obtained at no cost by email request to david.liebgold@njmeadowlands.gov. Any technical questions regarding the Bid package shall be submitted in writing to the undersigned at david.liebgold@njmeadowlands.gov before **11:00 AM, Wednesday, October 10, 2014**; administrative questions may be directed to the undersigned at (201) 777-2414.

The Scope of Work under this Contract consists of providing all plant, labor, equipment, materials, tools, and services necessary to construct, wire, and install all the components necessary for a fully operational adaptive traffic signal control system for twenty one (21) traffic signals located in the Township of North Bergen and the Town of Secaucus in Hudson County, the Boroughs of Little Ferry, Moonachie, Teterboro, and Hasbrouck Heights, the Townships of Lyndhurst and South Hackensack, and the Village of Ridgefield Park in Bergen County New Jersey. The project includes the installation and wiring of vehicle detection units, antenna/transceiver assemblies, fiber optic cables, and associated infrastructure. The Notice-to-Proceed (NTP) letter is expected to be issued on or about **December 1, 2014**, and the Project to commence on or about **December 15, 2014,** weather permitting. Due to the current NJDOT and NJ Transit construction activities that are happening within the Project area, some of the locations may not be available for immediate construction upon NTP. A detailed list of the estimated availability timeline is included in the Contract Documents. Once a location becomes available for work to commence it shall be completed within 120 consecutive weekdays/work days.

The Contract Documents contain specific requirements for submission of a Bid. A Bid deposit, in the amount of five percent of the Bid price must accompany the Bid package. The attention of all Bidders is particularly called to the State and Federal requirements regarding equal employment opportunity, affirmative action, New Jersey business registration, public works contractor registration, and prevailing wages. For more information see the general instructions section of the Bid package. Bidders are required to comply with the requirements of **N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.** The NJMC reserves the right to reject any or all BIDS and to waive minor Bid defects.

NEW JERSEY MEADOWLANDS COMMISSION
David Liebgold, P.E., P.P.
Chief of Transportation

PROJECT OVERVIEW

MASSTR is an intelligent transportation system (ITS) that integrates adaptive traffic control, vehicle detection, and wireless communication technologies to optimize the operating efficiency of existing roadway infrastructure in the Hackensack Meadowlands District and surrounding roadways. MASSTR incorporates all of the region's traffic signals into one interconnected system that will achieve maximum roadway capacity and avoid unnecessary roadway widening by reducing inconsistencies and improving the coordination and communication between intersections.

MASSTR consists of three major components: an adaptive traffic control system (ATCS), a real-time vehicle-based vehicle detection system (VDS), and a wireless communication system (CS). The ATCS provides algorithmic intelligence to overcome the limitations of pre-timed signal control; and adjusts the signal timing and phasing on a cycle-by-cycle basis in response to the real-time traffic conditions with minimal manual interference. The VDS provides real-time vehicle-based vehicle detection and surveillance; and measures traffic volume, classification, and speed. The CS provides reliable communication between the ATCS, VDS, local traffic signal controllers, and central server.

The major components of the implementation of MASSTR include engineering services; ATCS, VDS, and CS system managements; and construction services. The NJMC intends to complete the engineering services, including the preparation of plans, specifications, estimates and as-builts; project management; and construction inspection, using NJMC staff. The ATCS, VDS, and CS system managements are intended to be individually procured through the Systems Manager method adhering to the qualification criteria detailed in N.J.S.A. 52:34-12, 49 C.F.R. 18.36, and the Brooks Act. The procurement of construction services will utilize a low-bid process that adheres to both N.J.S.A. 52:34-12 and 49 C.F.R. 18.36.

The design and construction of MASSTR is divided into five phases of approximately 20-30 signalized intersections each. The construction of each phase is divided into the four main categories: materials ordering, communication poles and traffic signal pole extension installation; electrical wiring; and system installation, setup, testing, deployment and validation.

Exhibit 1 below summarizes the "hybrid" procurement approach.

Exhibit 1. Procurement Framework

Procurement Item	Work Distribution	Method of Award	Contract Form	Contract Type
Construction Phases I, II, III, IV, & V	Low-Bid Contractor	Low-Bid	Phased	Fixed Price/ Unit Price
Adaptive Traffic Control System	System Manager	Price and Other Factors	Phased	Fixed Price/ Unit Price
Vehicle Detection System	System Manager	Price and Other Factors	Phased	Fixed Price/ Unit Price
Communication System	System Manager	Price and Other Factors	Phased	Fixed Price/ Unit Price
Traffic Management Center Equipment	Commodity (COTS)	Low-Bid	Purchase Order	Fixed Price/ Unit Price

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

GENERAL INSTRUCTIONS

1.0 DEFINITION AND TERMS

1.1 Addendum (a) - written instructions issued prior to the opening of BIDS which clarify, correct or change the bidding requirements or the contract documents.

1.2 ATCS – Adaptive Traffic Control System, a key system of MASSTR.

1.3 BID - the proposal of the Bidder submitted on the prescribed form setting forth the prices for the work to be performed.

1.4 BIDDER – Any corporation, partnership, or individual submitting a Bid to perform the work specified in the Contract Documents.

1.5 Contract Documents – the contract and all documents contained in the "Specifications and Bid Documents" along with any addenda thereto, including all Plans, Reports or other drawings or materials referenced or incorporated therein.

1.6 Contract Time - the time estimated to complete all second phase of MASSTR.

1.7 Contractor - the entity to whom the contract has been awarded and who is responsible for performing the work.

1.8 CS - Communication System, a dedicated wireless communication network, a key system of MASSTR.

1.9 VDS - Vehicle Detection System, a key system of MASSTR.

1.10 MASSTR - Meadowlands Adaptive Signal System for Traffic Reduction.

1.11 NJDOT – New Jersey Department of Transportation.

1.12 NJMC – New Jersey Meadowlands Commission.

1.13 Specifications – the technical specifications contained in Bid package along with any addenda thereto, including all Plans, Reports, Maps, shop drawings, or other drawings or materials referenced or incorporated therein.

1.14 Subcontractor – an entity having an arrangement with a Contractor, where the Contractor uses the products and/or services of that entity to fulfill some of its obligations under its Contract, while retaining full responsibility for the performance of all of its [the Contractor's] obligations under the contract, including payment to the subcontractor. The subcontractor has no legal relationship with the NJMC, only with the Contractor.

1.15 Work - the entire completed construction, or the various separately identifiable parts thereof required to be furnished under the contract documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the contract documents.

2.0 CONTRACT DOCUMENTS EXAMINATION

2.1 Bidders must carefully examine the Contract Documents and completely familiarize themselves with the actual conditions under which the Work is to be performed, as well as the extent and requirements of the Work.

2.2 Bidders shall use complete sets of Contract Documents in preparing BIDS. The NJMC assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

2.3 In the event the Contractor discovers a discrepancy, error, omission, or ambiguity in the Contract Documents, or if the Contractor has any doubt or question as to the intent or meaning of the Contract Documents, the Contractor must immediately notify the NJMC.

2.4 The Contractor is not relieved of the obligation to complete work because of a discrepancy, error, omission, or ambiguity.

2.5 Changes to the Contract documents may be made only by the NJMC via written addenda.

2.6 Receipt of Addenda must be acknowledged in the space provided for such purpose in the Bid Forms. Compliance by Bidder with issued addenda is required whether or not receipt is acknowledged.

3.0 INTERPRETATION OF QUANTITIES (QUANTITIES ARE APPROXIMATE)

3.1 The quantities appearing in the specifications are estimates. The NJMC has a right to increase or decrease the quantities of work, and has the right to eliminate items in their entirety, at its sole discretion.

3.2 Changes to the work resulting in a twenty percent (25%) or less decrease in the Bid quantity of unit price items shall not be considered sufficient basis for adjustment of unit price costs. Additionally, changes in the Bid quantity of unit price items of twenty percent (25%) or less shall not be sufficient grounds for an award of consequential, indirect, or other damages, nor shall changes to quantities be regarded as grounds for the grant of an extension of time to complete the work

3.3 The NJMC will pay only for the quantities of work completed as specified in the contract.

4.0 "IF AND WHERE DIRECTED"

4.1 The Bid may include items for which the NJMC has designated quantities as "if and where directed." The estimated quantities set out in the Bid for "if and where directed" quantities are presented for the purpose of obtaining a representative Bid unit price, but are not indicative of the NJMC's intent regarding incorporation into the project. The NJMC has the right to direct the Contractor to perform work using "if and where directed" quantities.

5.0 BID BOND AND BONDING REQUIREMENTS

5.1 The Bid Bond guarantees execution of the Contract by the Bidder receiving Award.

5.2 The Bid Bond shall be in the amount of 5% of the Bid.

5.3 The Bidder shall ensure that the Bid Bond is properly completed and furnished by a surety authorized to do business in the State of New Jersey. An authorized surety list can be found here: http://www.state.nj.us/dobi/surety.htm

5.4 The Bidder shall ensure that the Bid Bond has a power of attorney executed by the Surety. The power of attorney shall set forth the limits of authority of the attorney-in-fact who has signed the bond on behalf of the Surety to bind the company and shall further certify that such power is in full force and effect as of the date of the bond.

5.5 The NJMC will not accept Bid Bonds that do not conform to this Section 5.0 and are not substantiated by a valid power of attorney executed by the Surety.

5.6 If the Bidder withdraws its Bid or otherwise fails to fulfill any requirements or obligations that prevent Bidder from entering into a contract or beginning work on the Project, the Bid Bond is forfeited, and the NJMC has the right to recover under the terms and provisions of the Bid Bond. The NJMC has the right, at its sole discretion, to award the Contract to the next lowest responsible Bidder, to reject all Bidders and re-advertise the Project, or to take any other action that the NJMC deems necessary.

5.7 The NJMC reserves the right to reject any Bidder that fails to submit a Bid Bond.

6.0 PUBLIC OPENING OF BIDS

6.1 **The NJMC will open and read BIDS publicly at the time and place indicated in the advertisement or such other time and place as established by addenda. The NJMC invites bidders, their authorized agents, and other interested parties to be present.**

7.0 BALANCED BIDS

7.1 The Bidder shall reflect in the Bid price for each Item the cost the Bidder anticipates incurring for the performance or supply of that Item. Submission of intentionally unbalanced BIDS may be cause for the rejection of the entire Bid.

8.0 EVALUATION OF BIDS:

8.1 The NJMC may make such investigations as it deems necessary to determine the ability of the Bidder to perform the work; and the Bidder shall furnish all such information and data for this purpose as NJMC may request. The NJMC reserves the right to reject any Bid if the evidence submitted by (or the investigation of) such Bidder fails to satisfy it that such Bidder is properly qualified to carry out the obligations of the Contract, and to complete the work contemplated therein.

8.2 Bidders shall be experienced in the kind of work to be performed, have the necessary equipment therefore, and possess sufficient capital to properly execute the work within the time allowed. BIDS received from Bidders who have previously failed to complete contracts within the time required, or who have previously performed similar work in an unsatisfactory manner, may be rejected. A Bid may be rejected if the Bidder cannot show that it has the necessary ability, plant, and equipment to commence the work at the time prescribed, and thereafter to prosecute and complete the work at the rate or within the time specified. A Bid may also be rejected if the Bidder is already obligated for the performance of other work that would delay the commencement, prosecution, or completion of the Work.

8.3 In evaluating the BIDS, the NJMC shall consider the qualifications of the Bidders, whether or not the BIDS comply with the prescribed requirements, and alternates and unit prices if

requested in the Bid Forms. Final determination will be at the sole discretion of the NJMC and will be made after receipt of BIDS.

8.4 The NJMC may consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work. Operating costs, maintenance considerations, performance data, and guarantees of materials and equipment may also be considered.

8.5 The NJMC reserves the right to reject the Bid of any Bidder who does not pass these investigations to the satisfaction of the NJMC.

8.6 If requested by the NJMC, the three lowest Bidders shall, within 10 days of such request, submit a financial statement prepared by a Certified Public Accountant.

9.0 INTERPRETATION AND ADDENDA

9.1 The Bidder understands and agrees that its Bid is submitted on the basis of the specifications prepared by the NJMC. The Bidder accepts the obligation to become familiar with these specifications.

9.2 Bidders are expected to examine the specifications and related Bid documents with care and observe all their requirements. Ambiguities, errors or omissions noted by Bidders should be promptly reported in writing to the NJMC. In the event the Bidder fails to notify the NJMC of such ambiguities, errors or omissions, the Bidder shall be bound by the requirements of the specifications and the Bidder's submission.

9.3 No oral interpretation and or clarification of the meaning of the specifications for any goods and services will be made to any Bidder. Such request shall be in writing, addressed to the NJMC's representative stipulated in the specification. In order to be given consideration, a written request must be received at least seven (7) business days prior to the date fixed for the opening of the BIDS.

9.3.1 All interpretations, clarifications and any supplemental instructions will be in the form of written addenda to the specifications and will be distributed to all prospective Bidders. All addenda so issued shall become part of the specification and Bid documents, and shall be acknowledged by the Bidder in the Bid. The NJMC's interpretations or corrections issued via addenda shall be final unless superseded by subsequent addenda.

9.4 **Discrepancies in BIDS**

9.4.1 If the amount shown in words and its equivalent in figures do not agree, the written words shall be binding. Ditto marks are not considered writing or printing and shall not be used.

9.4.2 In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the NJMC of the extended totals shall govern.

9.5 **Questions**

9.5.1 Any technical questions regarding the Bid package shall be submitted in writing to the undersigned at david.liebgold@njmeadowlands.gov before **11:00 AM, Friday, October 10, 2014.**

9.5.2 Administrative questions may be directed to David Liebgold, Chief of Transportation at david.liebgold@njmeadowlands.gov or (201) 777-2414.

10.0 DISQUALIFICATION OF BIDDERS

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

10.1.1 Evidence of collusion among bidders.

10.1.2 Uncompleted work, which in the opinion of the NJMC, might hinder or prevent completion of additional work if awarded.

10.1.3 Failure to satisfy the pre-award requirements for Disadvantage Business Enterprise (DBE).

10.1.4 Submission of a materially unbalanced bid. A materially unbalanced bid is a bid where there is a reasonable doubt that award to the bidder submitting a mathematically unbalanced bid, which is structured on the basis of nominal prices for some work and inflated prices for other work, will result in the lowest ultimate cost to the NJMC.

10.1.5 Lack of competency or lack of adequate machinery, plant, or other equipment.

10.1.6 Unsatisfactory performance on previous or current contracts.

10.1.7 Questionable moral integrity as determined by the Attorney General of New Jersey or the NJMC.

10.1.8 Any other outward actions or lack of action that demonstrates the bidder is not responsible.

10.1.9 Disqualification, suspension, or debarment of an individual, firm, partnership, corporation, or any combination as required by N.J.S.A. 16:44-8.1.

11.0 REJECTION OF BIDS

11.1 The NJMC reserves the right to reject any and all BIDS if it determines that it is in the best interest of the NJMC to do so. In addition, the NJMC reserves the right to reject any Bid that does not conform to the requirements set forth in the Contract Documents.

11.2 In the event the NJMC rejects any or all BIDS for any reason whatsoever, any rejected Bidder shall not be entitled to compensation in connection with the preparation and submittal of the Bid or compensation for profits anticipated had the Contract been awarded to the Bidder.

12.0 CONSENT OF SURETY

12.1 Bidder shall submit with the Bid a Certificate (Consent of Surety) with Power of Attorney for the full amount of the Bid price from a Surety Company authorized to do business in the State of New Jersey and acceptable to the NJMC stating that it will provide said Bidder with a Performance Bond in the full amount of the Bid. This certificate shall be obtained in order to confirm that the Bidder to whom the contract is awarded will furnish Performance and Payment Bonds from an acceptable surety company on behalf of said Bidder, any or all subcontractors or by each respective subcontractor or by any combination thereof which results in performance security equal to the total amount of the contract.

12.2 The NJMC reserves the right to reject any Bidder that fails to submit a Consent of Surety Certificate.

13.0 BONDS

13.1 Provide a Performance Bond and a Payment Bond to the NJMC within 15 days of the date of Award. Ensure that the penal sum of the bond is equal to at least the Total Contract Price less the Bid price for the performance and payment bond. With the bond, provide a certification authorizing the attorney-in-fact to commit the Surety and a true and correct statement of the Surety's financial condition.

13.2 Failure to submit a performance and payment bond with the executed contract shall be cause for declaring the contract null and void.

13.3 The Bidder is responsible for providing NJMC with a satisfactory replacement bond in the event the Surety becomes insolvent or is otherwise unable to fulfill its obligations.

13.4 The performance and payment bond provided shall not be released until final acceptance of the whole work and then only if any liens or claims have been satisfied. The surety on such bond or bonds shall be a duly authorized surety company authorized to do business in the State of New Jersey pursuant to N.J.S.A. 17:31-5.

13.5 Upon acceptance of the work by the NJMC, the contractor shall submit a maintenance bond in an amount of 10% of the project costs guaranteeing against defective quality of work or materials for the period of 2 years.

14.0 AWARD OF CONTRACT

14.1 The NJMC will award the contract to the lowest responsible Bidder whose Bid conforms in all respects to the requirements set forth in the Contract Documents. The NJMC will award the contract based on the total contract price.

14.2 The Award is not binding upon the NJMC until the NJMC has executed the Contract. No person shall perform any Work in furtherance of the Contract until notified that the Contract has been executed.

14.3 Within 14 days of the date of Notice of Award, the Bidder shall properly and duly execute the Contract and deliver to the NJMC the Performance bond, payment bond, and insurance certificate.

15.0 SUBCONTRACTOR

15.1 The Bidder shall provide name of all subcontractors to whom the Bidder will subcontract.

15.2 The Bidder shall provide the following information regarding the subcontractor:

15.2.1 Proof of the subcontractor's valid business registration with the New Jersey Department of Treasury, Division of Revenue as defined in N.J.S.A. 52:32-44.

15.2.2 Proof of the subcontractor's valid Public Works Contractor Registration with the New Jersey Department of Labor.

15.3 Consent of the NJMC to allow work to be subcontracted does not relieve the Contractor of its responsibility for the Work, nor does it relieve the Surety of its obligations under the bond. The Contractor is responsible for the work of subcontractors. Ensure that the work performed by subcontractors conforms to the Contract.

15.4 The NJMC's consent to subcontract any part of the Work shall not be construed as approval of the subcontract or its terms, but only as approval of the Contractor's request to subcontract to its chosen subcontractor.

16.0 DISADVANTAGE BUSINESS ENTERPRISE (DBE)

16.1 **Utilization of disadvantaged business as contractors, materials suppliers, and equipment lessors**

The NJMC 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 NJMC or such remedy as the NJMC deems appropriate. Requirements set forth in this section shall also be physically included in all subcontracts in accordance with USDOT requirements.

16.2 **Policy**

It is the policy 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.

16.3 **Contractor's DBE obligation**

The NJMC 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 NJMC 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 NJMC federally funded contracts. The NJMC 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.

16.4 **Compliance**

To signify and affirm compliance with the provisions of this attachment, the bidder shall complete the Schedule of DBE Participation.

16.5 **Goals for this project**

16.5.1 This portion of the project includes a goal of awarding **zero percent (0%)** of the total contract value to subcontractors, equipment lessors and/or material suppliers that qualify as disadvantaged business enterprises (DBEs).

16.5.1.1 Failure to meet the minimum goal placed on this portion of the 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.

16.5.1.2 As a source of information only, a disadvantaged business enterprise directory is available from the division of civil rights and affirmative action at http://www.njucp.net/. 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.
Http://www.state.nj.us/transportation/business/civilrights/DBE.shtm

16.5.2 Definitions

16.5.2.1 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).

16.5.2.2 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.

16.5.2.3 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.

16.5.2.3.1 Black Americans – includes any persons having origins in any of the black racial groups of Africa;
16.5.2.3.2 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;
16.5.2.3.3 Native American - includes persons who are American Indians, Eskimos, Aleuts or native Hawaiians;
16.5.2.3.4 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, Tuvalu, Nauru, federated states of Micronesia or Hong Kong;

16.5.2.3.5 Subcontinent Asian Americans - includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives islands, Nepal or Sri Lanka;

16.5.2.3.6 Women - regardless of race;

16.5.2.3.7 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 NJMC, on a case-by-case basis;

16.6 **Counting DBE participation**

16.6.1 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 NJMC 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.

16.6.2 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.

16.6.3 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.

16.6.4 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.

16.6.5 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.

16.6.6 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.

16.7 **GOOD FAITH EFFORT**

16.7.1 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:

16.7.1.1 Attendance at a pre-bid meeting, if any, scheduled by the NJMC to inform DBE's of subcontracting opportunities under a given solicitation.

16.7.1.2 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.

16.7.1.3 Written notification to DBE's that their interest in the contract is solicited;

16.7.1.4 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;

16.7.1.5 Efforts made to negotiate with DBE's for specific sub-BIDS including at a minimum:

16.7.1.5.1 The names, addresses and telephone numbers of DBE's that were contacted;

16.7.1.5.2 A description of the information provided to DBE's regarding the plans and specifications for portions of the work to be performed; and

16.7.1.5.3 A statement of why additional agreements with DBE's were not reached;

16.7.1.6 Information regarding each DBE the bidder contacted and rejected as unqualified and the reasons for the bidder's conclusion;

16.7.1.7 Efforts made to assist the DBE in obtaining bonding or insurance required by the bidder or the NJMC.

Note: If the NJMC 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. The NJMC 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 NJMC, the State of New Jersey, or the USDOT.

17.0 SUBSTITUTES FOR PROPRIETARY ITEMS

17.1 If material or equipment is specified in the Contract by using the name of a proprietary item or the name of a particular supplier, the Contractor may propose a substitute except when the Special Provisions state that no substitution is permitted. To request approval for using a substitute item of material or equipment, submit a written request to the NJMC including the following:

17.1.1 Certification that the proposed substitute performs the functions and achieves the results called for by the design, is similar and of equal substance to that specified, and is suited to the same use as that specified.

17.1.2 A statement that the evaluation and approval of the proposed substitute does not hinder the Contractor's ability to complete the Contract.

17.1.3 A statement that the proposed substitute for use in the Work does not change or modify the Contract.

17.1.4 A complete detailed Manufacture's specification for the substitute.

17.1.5 Difference between the proposed substitute from that specified.

17.1.6 Manufacturer's recommendations, maintenance requirements, and repair or replacement requirements for the substitute.

17.2 The NJMC will evaluate the request and notify the Contractor in writing of approval or rejection of the proposed substitute. The NJMC has the right to require the Contractor to provide, at no cost to the NJMC, a special performance guarantee or other bond with respect to a substitute.

17.3 If, during the use of the substitute material or equipment, the NJMC determines that the work produced is not in conformance with the Contract, immediately discontinue the use of the substitute and complete the remaining work with the specified material or equipment. Remove the deficient work and replace it, or take corrective action as directed by the NJMC.

17.4 The NJMC will not make payment or modify Contract Time to remove and replace work resulting from an authorized substitution.

17.5 **THE BUY AMERICA ACT – 23 CFR 635.410**

17.5.1 The provisions of this section shall prevail and be given precedence over any requirements of this subpart which are contrary to this section. However, nothing in this section shall be construed to be contrary to the requirements of §635.409(a) of this subpart.

17.5.2 No Federal-aid highway construction project is to be authorized for advertisement or otherwise authorized to proceed unless at least one of the following requirements is met:

17.5.2.1 The project either: (i) Includes no permanently incorporated steel or iron materials, or (ii) if steel or iron materials are to be used, all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.

17.5.2.2 The State has standard contract provisions that require the use of domestic materials and products, including steel and iron materials, to the same or greater extent as the provisions set forth in this section.

17.5.2.3 The State elects to include alternate bid provisions for foreign and domestic steel and iron materials which comply with the following requirements. Any procedure for obtaining alternate BIDS based on furnishing foreign steel and

iron materials which is acceptable to the Division Administrator may be used. The contract provisions must (i) require all bidders to submit a bid based on furnishing domestic steel and iron materials, and (ii) clearly state that the contract will be awarded to the bidder who submits the lowest total bid based on furnishing domestic steel and iron materials unless such total bid exceeds the lowest total bid based on furnishing foreign steel and iron materials by more than 25 percent.

17.5.2.4 When steel and iron materials are used in a project, the requirements of this section do not prevent a minimal use of foreign steel and iron materials, if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or $2,500, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the steel and iron products as they are delivered to the project.

17.5.3 Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section. Certifications for all products are required to be submitted for NJMC approval. All products shall be approved by the NJMC prior to use for construction. Product purchase orders, receipts, or invoices clearly displaying the product manufacturer are required prior to use for construction. Only approved products are permitted to be present at the job site.

18.0 APPLICABLE LAWS

18.1 This Contract shall be construed and governed by the laws of the State of New Jersey. It is the Contractor's responsibility to be aware of and comply with Federal, State, and local laws, ordinances, rules, and regulations, and orders and decrees of bodies or tribunals having jurisdiction or authority that affect those engaged or employed on the Work, or that affect the conduct of the Work.

18.2 The Contractor shall observe and comply with, and ensure the Contractor's agents and employees observe and comply with, laws, ordinances, rules, regulations, orders, and decrees.

18.3 The Contractor shall Defend and indemnify the NJMC and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's agents or employees, subcontractors of any tier, or suppliers.

18.4 If discrepancies or inconsistencies are discovered between any document of the Contract and any law, ordinance, regulation, order, or decree, immediately notify the NJMC in writing.

18.5 The Contractor shall obtain permits, grants, licenses, authorizations, certifications, and other approvals for the prosecution of the Work, except where the NJMC has already procured such permits, grants, licenses, authorizations, certifications, and other approvals.

18.6 The Contractor shall comply with all required permits, grants, licenses, authorizations, certifications, and approvals. The NJMC reserves the right to suspend the Work if the Contractor fails to comply with required permits, grants, licenses, authorizations, certifications, and approvals.

18.7 The Contractor shall provide to the NJMC, whenever requested, documentation pertaining to the any noncompliance by Contractor and related corrective actions taken. The NJMC will

not make payment for or modify Contract Time for performing corrective and remedial work required to bring the Contractor into compliance.

18.8 The Contractor is responsible to pay fines levied against the Contractor, its agents, employees, and subcontractors that arise out of or are alleged to arise out of noncompliance with permits, grants, licenses, authorizations, certifications, or approvals.

18.9 The NJMC will recover from the Contractor costs due to fines levied against the NJMC that arise out of, or are alleged to arise out of, noncompliance by the Contractor, its agents, employees, and subcontractors with permits, grants, licenses, authorizations, certifications, or other approvals.

18.10 The NJMC may hold the Contractor responsible for all engineering, inspection, and administration costs (including overhead) incurred because of the Contractor's noncompliance.

18.11 Regarding any claim arising from a breach of Contract, tort (including negligence), or otherwise, the NJMC will not be liable to the Contractor for any special, consequential, incidental, or penal damages, including, but not limited to, loss of profit or revenues, loss of rental value for Contractor-owned equipment, damages to associated equipment, cost of capital, or interest.

18.12 There shall be no liability upon the NJMC or authorized representatives of the NJMC, either personally or as officials of the State, in carrying out any of the provisions of the Contract or in exercising any power or authority granted to them by or within the scope of the Contract, it being understood that in all such matters they act solely as agents and representatives of the State.

18.13 All products are required to be approved by the NJMC prior to use for construction. Detailed product specifications and a sample of each item shall be submitted to the NJMC for approval for use in construction. Only approved products are permitted to be present at the job site.

18.14 **FEDERAL LAWS**

18.14.1 By submitting a Bid the Bidder assures and certifies, with respect to this specification package, that it will comply with all applicable federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance, and use of federal funds for this project. Performance under this BID shall be governed by and in compliance with the following requirements as applicable to the respondent and any sub-contractors. The applicable provisions to the BID include but are not limited to the following:

18.14.1.1 Form FWHA 1273 – Appendix F
18.14.1.2 Davis-Bacon Act - 40 U.S.C. 3141, et seq.
18.14.1.3 Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
18.14.1.4 Hatch Act - 5 U.S.C. 1501, et seq.
18.14.1.5 Clean Air Act, P.L. 90-148, as amended
18.14.1.6 Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
18.14.1.7 Drug Abuse Office and Treatment Act of 1972, as amended, 21 U.S.C. 1101, et seq.
18.14.1.8 The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, P.L. 91-616, as amended - 42 U.S.C. 4541, et seq.

18.14.1.9 Power Plant and Industrial Fuel Use Act of 1978, P.L. 100-42 - Section 403 - 42 U.S.C.8373
18.14.1.10 Contract Work Hours and Safety Standards Act - 40 U.S.C. 3701, et seq.
18.14.1.11 Copeland Anti-kickback Act, as amended - 18 U.S.C. 874 and 40 U.S.C. 3145
18.14.1.12 National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.
18.14.1.13 Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.
18.14.1.14 Americans with Disabilities Act of 1990 - 42 U.S.C. 12101, et seq.
18.14.1.15 Section 504 of the Rehabilitation Act of 1973, as amended - 29 U.S.C. 794
18.14.1.16 Title VI of the Civil Rights Act of 1964 - 42 U.S.C. 2000d et seq.
18.14.1.17 Title IX of the Federal Property and Administrative Services Act of 1949 - 40 U.S.C. 1101, et seq.
18.14.1.18 Limitation on Use of Appropriated Funds to Influence Certain Federal Contracting and Financial Transactions – 31 U.S.C. 1352
18.14.1.19 Freedom of Information Act - 5 U.S.C. 552, as amended
18.14.1.20 Noise Control Act of 1972 – 42 U.S.C. 4901, et seq.
18.14.1.21 Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303 and 23 U.S.C. 138
18.14.1.22 Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended -42 U.S.C. 9601-9657
18.14.1.23 Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 - 42 U.S.C. 6901, et seq.
18.14.1.24 The Federal Funding Transparency and Accountability Act of 2006, as amended (Pub. L. 109–282, as amended by section 6202 of Public Law 110–252)
18.14.1.25 Interim Final Guidance on Buy American – 74 FR 18449 (April 23, 2009), 2 C.F.R. Part 176
18.14.1.26 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations – 2 C.F.R. Part 215
18.14.1.27 Cost Principles for State and Local Governments – 2 C.F.R. Part 225
18.14.1.28 Non-procurement Suspension and Debarment – 2 C.F.R. Part 1200
18.14.1.29 Investigative and Enforcement Procedures - 14 C.F.R. Part 13
18.14.1.30 Procedures for predetermination of wage rates - 29 C.F.R. Part 1
18.14.1.31 Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States - 29 C.F.R. Part 3
18.14.1.32 Labor standards provisions applicable to contracts governing federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act) - 29 C.F.R. Part 5
18.14.1.33 Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements) - 41 C.F.R. Parts 60, et seq.
18.14.1.34 Contractor Qualifications - 48 C.F.R. Part 9
18.14.1.35 Uniform administrative requirements for grants and cooperative agreements to state and local governments - 49 C.F.R. Part 18
18.14.1.36 New Restrictions on Lobbying – 49 C.F.R. Part 20
18.14.1.37 Nondiscrimination in Federally Assisted Programs of the Department of Transportation –Effectuation of Title VI of the Civil Rights Act of 1964 – 49 C.F.R. Part 21
18.14.1.38 Uniform relocation assistance and real property acquisition for Federal and Federally assisted programs - 49 C.F.R. Part 24
18.14.1.39 Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance - 49 C.F.R. Part 25
18.14.1.40 Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance - 49 C.F.R. Part 27

18.14.1.41 Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Department of Transportation – 49 C.F.R. Part 28
18.14.1.42 Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors - 49 C.F.R. Part 30
18.14.1.43 Government wide Requirements for Drug-Free Workplace (Financial Assistance) – 49 C.F.R. Part 32
18.14.1.44 DOT's implementing ADA regulations, including the ADA Accessibility Guidelines in Part 37, Appendix A - 49 C.F.R. Parts 37 and 38
18.14.1.45 Procedures for Transportation Workplace Drug and Alcohol Testing Programs – 49 C.F.R. Part 40
18.14.1.46 Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs – 49 C.F.R. Part 26

Executive Orders
18.14.1.47 Executive Order 11246 - Equal Employment Opportunity
18.14.1.48 Executive Order 11990 - Protection of Wetlands
18.14.1.49 Executive Order 11988 – Floodplain Management
18.14.1.50 Executive Order 12372 - Intergovernmental Review of Federal Programs
18.14.1.51 Executive Order 12549 – Debarment and Suspension
18.14.1.52 Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
18.14.1.53 Executive Order 13166 – Improving Access to Services for Persons With Limited English Proficiency

Office of Management and Budget Circulars
18.14.1.54 A-87 – Cost Principles Applicable to Grants and Contracts with State and Local Governments
18.14.1.55 A-102 – Grants and Agreements with State and Local Governments
18.14.1.56 A-133 - Audits of States, Local Governments, and Non-Profit Organizations
18.14.1.57 Any other applicable OMB Circular based upon the specific TIGER II Grant Recipient

Federal Highway Legislation
18.14.1.58 Brooks Act (for FHWA projects, this replaces Title IX of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 541, et seq).) - 40 U.S.C. 1101-1104
18.14.1.59 Highway Design and Construction Standards, 23 U.S.C. 109
18.14.1.60 Planning, 23 U.S.C. 134 and 135 (except for projects that are not regionally significant that do not receive funding under Title 23 or Chapter 53 of Title 49)
18.14.1.61 Tolls, 23 U.S.C. 301 (to the extent the recipient wishes to toll an existing free facility that has received Title 23 funds in the past)
18.14.1.62 Size, Weight, and Length Limitations - 23 U.S.C. 127, 49 U.S.C. 31101 et seq.

Federal Highway Regulations
18.14.1.63 Planning 23 – C.F.R. Part 450 (except for projects that are not regionally significant that do not receive funding under Title 23 or Chapter 53 of Title 49)
18.14.1.64 National Highway System Design Standards – 23 C.F.R. Part 625
18.14.1.65 Manual on Uniform Traffic Control Devices – 23 C.F.R. Part 655
18.14.1.66 Environmental Impact and Related Procedures – 23 C.F.R. Part 771
18.14.1.67 Procedures for Abatement of Highway Traffic and Construction Noise - 23 C.F.R. Part 772
18.14.1.68 Procedures Implementing Section 4(f) of the Department of Transportation Act – 23 C.F.R. Part 774

18.14.1.69 Permitting Requirements under the National Pollutant Discharge Elimination System – 40 C.F.R. Part 122

19.0 EQUAL EMPLOYMENT OPPRTUNITY

19.1 All parties to any contract with the State of New Jersey agree not to discriminate in employment and agree to abide by all anti-discrimination laws including those contained within N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127) N.J.AC. 17:27, and all rules and regulations issued there under.

19.2 During the performance of this contract, the contractor agrees as follows:

19.3 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, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, 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 NJMC Compliance Officer setting forth provisions of this nondiscrimination clause.

19.3.1 The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees places 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, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

19.3.2 The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractors' commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

19.3.3 The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to the N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time with the Americans with Disabilities Act.

19.3.4 When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith effort to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is

equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

19.3.4.1 If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et.seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurance from the construction trade union at least five business days prior to the commencement of the construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under Section 19.3.4.2 below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

19.3.4.2 If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of Section 19.3.4.1 above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

(l) To notify the NJMC Compliance Officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with its awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-

discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractors or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of Section 19.3.4.3 below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the NJMC Compliance Officer and to the Dept. of LWD, Construction EEO Monitoring Program.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Dept. of LWD, Construction Monitoring Program upon request.

19.3.4.3 The contractor or subcontractor agrees that nothing contained in Section 19.3.4.2 above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to Section 19.3.4.2 above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced

trainees and trainees as percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ration established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of Section 19.3.4.2 above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union..

After notification of award, but prior to signing a construction contract, the contractor shall submit to the NJMC compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA201) electronically provided to the NJMC by the Division, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a monthly thereafter for the duration to his contract to the Division and to the NJMC compliance officer.

The contractor agrees to cooperate with the NJMC in the payment of budgeted funds, as is necessary, for the on-the-job programs for outreach and training of minorities and women.

19.3.5 The contractor and its subcontractor shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27).**

19.3.6 It is the policy of the NJMC that its contracts should create a workforce that reflects the diversity of the State of New Jersey. Therefore, contractors engaged by the NJMC to perform under the construction contract shall put forth a good faith effort to engage in recruitment and employment practices that further the goal of fostering equal opportunities to minorities and women.

19.3.7 The contractor must demonstrate to the NJMC's satisfaction that a good faith effort was made to ensure that minorities and women have been afforded equal opportunity to gain employment under the NJMC's contract with the contractor. Payment may be withheld from a contractor's contract for failure to comply with these provisions.

19.3.8 Evidence of a "good faith effort" includes, but is not limited to:

1. The Contractor shall requite prospective employees through the State Job bank website, managed by the Department of Labor and Workforce Development, available online at http://NJ.gov/JobCentralNJ;
2. The Contractor shall keep specific records of its efforts, including records of all individuals interviewed and hired, including the specific numbers of minorities and women;
3. The Contractor shall actively solicit and shall provide the [Reporting Agency] with proof of solicitations for employment, including but not limited to advertisements in general circulation media, professional service publications and electronic media; and
4. The Contractor shall provide evidence of efforts described at 2 above to the [Reporting Agency] no less frequently than once every 12 months.
5. The Contractor shall comply with the requirements set forth at N.J.A.C. 17:27.

19.3.9 To ensure successful implementation of Executive Order and Law, state agencies, independent authorities and colleges and universities must forward and Initial Project Workforce Report (AA201) for any projects funded with ARRA money to the Division of Public Contracts EEO Compliance immediately upon notification of award but prior to execution of the contract.

19.3.10 Additional Federal equal opportunity and affirmative action requirements are included in Appendix D.

20.0 CONTRACT TIME

20.1 The Contractor shall complete all Work under the Contract and specified portions thereof within the time specified in the Contract Documents.

20.2 The Bidder shall, after being notified by the NJMC to commence Work, initiate the Work diligently to ensure completion within the time designated therefore.

21.0 PAYMENTS, INSPECTION, & COMPLETION

21.1 No payment will be made unless duly authorized by the NJMC and accompanied by proper documentation.

21.2 Payment will be made monthly, for completed items, in accordance with the NJMC policy and procedures.

21.3 **Application for Payment:** The Contractor shall submit to the NJMC for review an application for payment, completed and signed by the Contractor and covering the work completed as of the last Friday of the month. The application shall be on a standard NJMC state invoice form and shall be accompanied by the supporting documentation required by the Contract Documents, and any other information that the NJMC may reasonably request.

21.3.1 The Contractor shall furnish written proof of payments made to subcontractors, manufacturers, suppliers, etc., within thirty days after receipt of payment for same. The NJMC shall have the right to deduct from a subsequent payment application, an estimated amount to cover the cost of the subject materials, equipment, and/or work, if the proof of payment is not furnished.

21.3.2 It is agreed that this Project is one contract for the whole and complete Work. No partial payments on account by the NJMC, or its use of parts of the Project; shall constitute the acceptance of any part of the Work before final inspection, acceptance, and final payment.

21.3.3 The Total Contract Amount shall be the total compensation paid to the Contractor for performing the Work. All duties, responsibilities, and obligations assigned to, or undertaken by the Contractor in the performance of the Work, shall be at his own expense, without change to the Total Contract Amount.

21.3.4 The NJMC shall retain ten percent of each payment until completion and acceptance of the Work. After completion and acceptance of the Work, payment will be made in full, including the retainage, authorized deductions, and approved Change Orders. In place of the NJMC withholding retainage, the Contractor may deposit with the NJMC negotiable bearer bonds or notes of the state of New Jersey, or any political subdivision of the State. The nature of the bonds or notes to be deposited shall be

subject to approval by the NJMC and conform to the requirements of applicable state contracting laws.

21.3.5 This policy shall only apply when the Contractor's performance is considered adequate. A greater amount may be withheld when specific circumstances necessitate such action or when the Contract Documents clearly indicate the withholding of other specified retainage.

21.4 **Review of Applications for Progress Payments:** The NJMC's recommendation for payment of any application shall constitute a representation by the NJMC to the NJMC (based on the NJMC's observations of the Work in progress as an experienced and qualified professional and on the NJMC's review of the application and attached information) that:

21.4.1 The Work has progressed to the point indicated.

21.4.2 To the best of the NJMC's knowledge, information, and belief the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning project, to the results of any subsequent tests required by the Contract Documents, and any qualifications stated in the NJMC's recommendation).

21.4.3 The Contractor is entitled to payment in the amount recommended.

However, by making any such recommendation, the NJMC will not be representing that:

21.4.4 Exhaustive or continuous on-site inspections were made to check the quality or quantity of the Work.

21.4.5 The means, methods, techniques, sequences, and procedures of the Contractor were reviewed.

21.4.6 Title to any work, materials, or equipment has passed to the NJMC free and clear of any liens, claims security interests, and encumbrances (hereafter in this Section referred to as liens).

21.5 The NJMC may refuse to recommend payment of the whole or any part of any application, if in the NJMC's opinion it would be incorrect to make such representations to the NJMC. The NJMC may also refuse to recommend any such payment (or because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended) to such extent as may be necessary, in the NJMC's opinion, to protect the NJMC from loss. Reasons for refusing to recommend payment, or for nullifying payments previously made, include but are not limited to the following:

21.5.1 Unacceptable Work not remedied.

21.5.2 Claims filed or reasonable evidence indicating probable filing of claims.

21.5.3 Failure of the Contractor to make payments properly to subcontractors, manufacturers, or suppliers.

21.5.4 A reasonable doubt that the Contract can be completed for the balance unpaid.

21.5.5 Damage to another contractor.

21.5.6 Failure of the Contractor to keep his work progressing in accordance with his progress schedule.

21.5.7 Failure to provide a status report on all complaints.

21.5.8 Failure to submit certified payrolls (including subcontractor's payrolls) corresponding to the time period covered by the payment application.

21.5.9 Failure to satisfactorily prosecute the Work in accordance with the Contract Documents.

21.5.10 Liens filed in connection with the Work.

21.5.11 Failure to comply with Affirmative Action goals and objectives in accordance with PL1975, c127.

21.5.12 Failure to submit any items required by the Contract Documents in the time frame specified.

21.5.13 Failure to maintain insurance and/or to provide proof of insurance.

21.6 **Contractor's Warranty of Title:** The Contractor warrants and guarantees that title to all work, materials, and equipment included in any and all of his applications for payment (whether or not incorporated in the Work), shall pass to the NJMC at the time of payment free and clear of all liens.

21.7 **Final Inspection:** Upon written notice from the Contractor that the Work is complete, the NJMC shall make a final inspection with the Contractor and the NJMC. The NJMC shall notify the Contractor (based on the NJMC's observation of the Work during construction and the final inspection), in writing, of all particulars in which the Work is incomplete and defective. The Contractor shall immediately complete the Work, and remedy said deficiencies, to the satisfaction of the NJMC.

21.8 **Acceptance of the Work:** After the Contractor has addressed all deficiencies to the satisfaction of the NJMC, delivered all operations and maintenance instructions, all schedules, guarantees, bonds, certificates of inspection, and other documents in accordance with the Contract Documents, the NJMC shall notify the Contractor in writing that the Work is acceptable, subject to the provisions of of the Contractors' Compliance section.

21.9 **Application for Final Payment**: After the NJMC has notified the Contractor of the acceptance of the Work in accordance with the Payments, Inspection, and Completion section, the Contractor shall then submit his application for final payment, following the progress payment procedures. The application for final payment shall be accompanied by all the specified documentation (and such other data and schedules as the NJMC may reasonably request), together with complete and legally effective releases or waivers of all liens arising out of, or filed in connection with, the Work. Said releases or waivers must be satisfactory to the NJMC. If any subcontractor, supplier, manufacturer, fabricator or distributor fails to furnish a release or receipt in full, the Contractor may furnish a bond or other collateral (satisfactory to the NJMC) to indemnify the NJMC against any lien. Final payment shall not be made by the NJMC unless the Contractor supplies all releases or waivers of liens.

21.10 **Acceptance of Final Payment Application**: If the NJMC's review of the application for final payment and the accompanying documentation reveals the submittal is in accordance with

the Contract Documents, and the NJMC is satisfied that the Contractor has fulfilled all his obligations, the NJMC shall give written notice to the Contractor that the Project has been completed, subject to the provisions of the Payments, Inspection, and Completion section, and shall present the final payment application to the NJMC.

21.10.1 If the NJMC's review indicates the application or any of the accompanying documentation is not in order, the NJMC shall return the application to the Contractor, indicating in writing the reasons for not recommending payment. The Contractor shall address all the NJMC's concerns, make the necessary additions and/or corrections, and resubmit the application.

21.11 **Waiver of Claims**: The issuance of payment by the NJMC, and the acceptance of same by the Contractor, shall constitute:

21.11.1 A waiver of all claims by the NJMC against the Contractor, except claims arising from unsettled liens, defective Work appearing after inspection, failure to comply with the Contract Documents, or any other claims previously made in writing and still unsettled. It shall not constitute a waiver by the NJMC of any rights with respect to the Contractor's continuing obligations under the Contract Documents. Further, it shall not constitute waiver of any legal arguments or defenses in any litigation filed as a result of the Contractor's breach.

21.11.2 A waiver of all claims by the Contractor against the NJMC, other than those previously made in writing and still unsettled.

21.12 **Contractor's Continuing Obligation**: The Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. The recommendation of the NJMC to pay any application for payment, or NJMC's issuance of the notice of Project Completion and, likewise, any payment by the NJMC to the Contractor in accordance with the Contract Documents, any use or acceptance of the Work by the NJMC or a failure to do so, or the NJMC's correction of any defective work shall not constitute acceptance of work not in accordance with the Contract Documents or a release of the Contractor's obligation to perform the Work in accordance with same.

22.0 WORK CONDITIONS

22.1 Standardized Contract Clause Concerning Site Conditions

22.1.1 Differing Site Conditions Clause - This clause provides for the adjustment of the contract terms if the contractor encounters:

22.1.1.1 Type I condition - subsurface or latent physical conditions that differ materially from those indicated in the contract, or

22.1.1.2 Type II condition - unknown physical conditions of an unusual nature that differ materially from those ordinarily encountered and generally recognized as inherent to the work**.**

22.2 Some examples of potential type I conditions include encountering the following: more rock than indicated in the contract, larger rock, rock that is harder to drill, permafrost when the boring had given no indication of its general extent, or unexpected quantities of underground water not indicated on the boring logs.

While these are potential Type I conditions, in order to receive compensation, the contractor must prove the following by a preponderance of evidence:

"(1) the contract documents must have affirmatively indicated or represented the subsurface or latent physical conditions which form the basis of plaintiff's claim; (2) the contractor must have acted as a reasonably prudent contractor in interpreting the contract documents; (3) the contractor must have reasonably relied on the indications of subsurface or latent physical conditions in the contract; (4) the subsurface or latent physical conditions actually encountered within the contract area must have differed materially from the conditions indicated in the same contract area; (5) the actual subsurface conditions or latent physical conditions encountered must have been reasonably unforeseeable; and (6) the contractor's claimed excess costs must be shown to be solely attributable to the materially different subsurface or latent physical conditions within the contract site. To prove these six elements, the contractor is only required to use a simple logical process in evaluating the information in the contract documents to determine the expected subsurface or latent physical conditions..."
(Source: NCHRP, "Selected Studies in Transportation Law, Construction Contract Law", p. 5-16)

Some examples of a potential Type II conditions include unanticipated hazardous waste deposits or unanticipated archaeological sites.

To recover costs under a Type II condition, the contractor must prove:

"(1) that it did not know about the condition; (2) that it could not have reasonably anticipated the condition after a review of the contract documents, a site inspection, and the contractor's general experience in that area; and (3) that the condition was unusual because it varied from the norm in similar construction work."
(Source: NCHRP "Selected Studies in Transportation Law, Construction Contract Law", p. 5-16)

Further guidance for design and construction engineers on Differing Site Conditions can be found in FHWA's Geotechnical Engineering Notebook, Geotechnical Guidelines No. 15, dated April 30, 1996. (See http://www.fhwa.dot.gov/bridge/gt-15.pdf).

22.3 **Suspensions of Work Ordered by the Engineer** - this clause provides for the adjustment of the contract terms if the performance of all or a portion of the work is suspended or delayed by the engineer, in writing, for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry). The contractor is required to submit a request for adjustment, in writing, to the engineer within 7 calendar days of receipt of the notice to resume work. Recovery of profit on costs resulting from suspensions of work is not allowed.

This clause does not preclude the recognition of constructive suspensions or delays resulting from the contracting agency's actions, without written notification. These are delays caused by the owner's instructions that are not in writing. The contractor may receive verbal orders from the engineer, or be delayed by the owners' lengthy review of submittals. Some states recognized constructive delays in their specifications prior to the FHWA regulation. The preamble to the regulation indicates that states may continue to recognize construction delays if this is provided in their standard specifications and contract administration procedures.

To qualify for an adjustment, suspensions must be for unreasonable periods and do not include brief, customary suspensions for reasons inherent to highway construction (i.e., material sampling and testing; approval of shop drawings, material sources, etc.; and other reasonable and customary suspensions necessary for the supervision of construction by the contracting agency). In addition, an adjustment under this clause is not allowed if the work is suspended for other reasons or if an adjustment is provided for, or excluded, under other terms or conditions of the contract.

23.0 MATERIAL CHANGES IN THE SCOPE OF WORK

23.1 This clause provides for the adjustment of the contract terms if the engineer orders, in writing, an alteration in the work or in the quantities that significantly change the character of work. The term "significant change" shall be construed to apply only to the following circumstances:

23.1.1 The altered character of the work differs materially from that of the original contract, or

23.1.2 A major item of work, as defined in the contract, is decreased by more than 25 percent of the original contract quantity; excluding if and where directed items.

23.2 This clause provides for adjustments resulting from formal change orders by the engineer, in writing, to the extent that the impacted work is part of the contract. Either party may initiate an adjustment and both must be in agreement before the work is performed. As with the suspension of work provision, this clause does not preclude the recognition of constructive suspensions or delays.

23.3 Emergency traffic signal repair and maintenance is required to be performed by the contractor for all State owned traffic signals. All emergency repairs require an approved change order prior to commencement of work. All emergency traffic signal repair will be reimbursed in accordance with the below listed prices. Prices for items not included on the below list will be negotiated on an as needed basis.

Emergency Replacement Item	Price	Emergency Replacement Item	Price
Emergency Response (Per Incident)	$ 2,000.00	Traffic Signal Assembly, Type 55s-2	$ 7,350.00
Foundations, Type sft	$ 1,800.00	Traffic Signal Assembly, Type 60s-2	$ 8,850.00
Foundations, Type mcf	$ 950.00	Traffic Signal Assembly, Type 65s-2	$ 9,000.00
Foundations, Type p-mc	$ 2,850.00	Traffic Signal Assembly, Type 20mk-1	$ 3,200.00
Foundations, Type stf	$ 3,300.00	Traffic Signal Assembly, Type 20mk-2	$ 4,200.00
Foundations, Type sfk	$ 1,850.00	Traffic Signal Assembly, Type 25mk-2	$ 4,250.00
Meter Cabinets, Type TL	$ 2,550.00	Traffic Signal Assembly, Type c-1	$ 1,300.00
Pedestrian Signal Assembly, Type w-1	$ 1,300.00	Traffic Signal Assembly, Type c-1-op	$ 4,600.00
Push Button Assembly	$ 260.00	Traffic Signal Assembly, Type mm-1	$ 1,450.00
Traffic Signal Assembly, Type 20ma-1	$ 2,650.00	Traffic Signal Assembly, Type mm-1-op	$ 3,660.00
Traffic Signal Assembly, Type 25ma-1	$ 3,000.00	Traffic Signal Standard, Type c	$ 2,000.00
Traffic Signal Assembly, Type 30s-2	$ 6,650.00	Traffic Signal Standard, Type t	$ 1,800.00
Traffic Signal Assembly, Type 35s-2	$ 6,550.00	Traffic Signal Standard, Type s	$ 5,000.00
Traffic Signal Assembly, Type 40s-1	$ 6,300.00	Traffic Signal Standard, Type k	$ 2,650.00
Traffic Signal Assembly, Type 40s-2	$ 7,000.00	Traffic Controller Assembly Turn-On	$ 2,500.00
Traffic Signal Assembly, Type 20ma-1-op	$ 6,500.00	Traffic Signal Standard, Type sc	$ 5,550.00
Traffic Signal Assembly, Type 40s-1-1-op	$10,600.00	Temporary Traffic Signal System	$55,000.00
Traffic Signal Assembly, Type 45s-1-1-op	$ 2,000.00	Interim Traffic Signal System	$37,500.00
Traffic Signal Assembly, Type 50s-2	$ 7,100.00	Optical Emergency Pre-Emption System	$12,500.00

24.0 SUSPENSION OF WORK & TERMINATION:

24.1 The NJMC may, at any time and without cause, suspend the Work, or any portion thereof, for a period of not more than ninety (90) days by notice in writing to the Contractor and the NJMC. The written notice shall establish the date on which the Work will be resumed. The Contractor shall resume work on the established date. The Contractor shall be allowed an increase in the Contract Price and/or an extension of the Contract Time attributable to the suspension; if the Contractor makes a claim therefore, and it is approved.

24.2 The NJMC may terminate the services of the Contractor after giving him and the surety seven (7) days written notice, upon the occurrence of any one or more of the following events. In such case, the Contractor shall not be entitled to receive any further payment. Where the Contractor's services have been so terminated by the NJMC, said termination shall not affect any rights or remedies of the NJMC against the Contractor existing at the time, or which may thereafter accrue.

24.2.1 If the Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code) now or hereafter in effect.

24.2.2 If the Contractor takes any equivalent or similar action by filing a petition or other notice under any other federal or state law in effect at such time relating to bankruptcy or insolvency.

24.2.3 If a petition is filed against the Contractor under any chapter of the Bankruptcy Code now or hereafter in effect at the time of filing.

24.2.4 If a petition is filed seeking any such equivalent or similar relief against the Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency.

24.2.5 If the Contractor makes a general assignment for the benefit of creditors.

24.2.6 If a trustee, receiver, custodian, or agent of the Contractor is appointed under applicable law or contract, whose appointment or authority to take charge of the Contractor's property is for the purpose of enforcing a lien against such property, or for the purpose of general administration of such property for the benefit of the Contractor's creditors.

24.2.7 If the Contractor admits in writing an inability to pay his debts as they become due.

24.2.8 If the Contractor persistently fails to perform the Work in accordance with the Contract Documents: including but not limited to, failure to supply sufficiently skilled workers, suitable materials, or equipment, or the failure to adhere to the progress schedule.

24.2.9 If the Contractor disregards any applicable laws or regulations.

24.2.10 If the Work to be performed under this Contract shall be abandoned by the Contractor. Abandonment shall mean that the Contractor has failed to perform any work on the Contract for a period of thirty consecutive calendar days.

24.2.11 If this Contract or any part thereof shall be assigned, transferred, or sublet without the previous notice to and written consent of the NJMC.

24.2.12 If the Contract or any claim thereunder shall be assigned by the Contractor other than as herein specified.

24.2.13 If the Contractor fails to maintain insurance during the entire Contract term and until the NJMC accepts the Contract Work and the Contract is ended or fails to provide the NJMC with proof of insurance upon request of the NJMC.

24.2.14 If the Contractor otherwise violates in any substantial way any provisions of the Contract Documents.

24.3 Upon seven days written notice to the Contractor, the NJMC may elect to abandon the Work and terminate the Contract without cause and without prejudice to any other right or remedy. In such case, the Contractor shall be paid for all completed Work, plus reasonable termination expenses.

25.0 CONTRACTOR'S COMPLIANCE

25.1 The Contractor and all subcontractor's shall provide the NJMC with a Public Works Contractor Certificate certifying that all employees employed by the Contractor or by any subcontractor have been paid wages not less than those required by the Contract in compliance with N.J.S.A. 34:11-56.25, *et seq*.

25.2 The Contractor shall be responsible for obtaining and paying all construction permits and licenses and shall pay all inspection fees associated with the prosecution of the Work. The Contractor shall also schedule and pay for all utility connections required for the Work.

25.3 The Contractor shall perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of his work. The Contractor shall be responsible for the finished Work complying accurately with the Contract Documents.

25.4 The Contractor shall provide at all times on the site, a competent, full-time, resident superintendent, who shall not be replaced without written notice to the NJMC, except under extraordinary circumstances. The superintendent shall be the Contractor's representative at the site and shall have the authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor.

25.5 The Contractor shall be responsible for providing competent, suitably qualified personnel to survey, layout, and perform the Work required by the Contract Documents. The Contractor shall maintain good discipline and order at the site. The Contractor shall be responsible for removing any person from the site who appears to be incompetent, unfaithful, disorderly or otherwise unsatisfactory. Said person shall not again be employed at the site without the written consent of the NJMC.

25.6 The Contractor shall be responsible for the proper and timely submittal of the required documents for all equipment and materials so as to not delay the progress of the Work. The Contractor shall determine delivery availability for all items to be furnished and shall order all long-lead items as soon as possible after the award of the contract, to ensure delivery in time to complete the work in the time available.

25.7 The Contractor shall be fully responsible to the NJMC for all acts and omissions of his subcontractors, suppliers, organizations, and other persons performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between the NJMC, and any such subcontractor, supplier, organization or other person.

25.8 The Contractor shall give all notices and comply with all laws and regulations applicable to furnishing and performing the Work. If the Contractor performs any work that is contrary to such laws and/or regulations, he shall be responsible for all costs arising thereof. If the Contractor observes that the Contract Documents are at variance with these laws and/or regulations, he shall promptly notify the NJMC in writing. Any necessary changes to the Work will be authorized by a Change Order.

25.9 If the Contractor elects to remove, replace or relocate any poles, utilities or structures during the performance of the Work, he shall be responsible for making all the necessary arrangements and obtaining all the necessary permits and approvals without the involvement of the NJMC.

25.10 The Contractor shall be responsible for all damages resulting from the performance of the Work. Should any claim be made against the NJMC as a result of the performance of the Work, the Contractor shall attempt to promptly settle with such other party.

25.11 The Contractor shall not load any part of the Work in a manner that will endanger the Work. The Contractor shall be responsible for damage caused to the Work and to adjacent property, subject to said dangerous stresses or pressures.

25.12 The Contractor shall be responsible for initiating, maintaining, and supervising all safety programs and precautions regarding the Work. The Contractor shall comply with all applicable laws and regulations for the safety and protection of persons and property; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall remedy all damage, injury or loss to any persons or property caused by the Contractor or any of his subcontractors, suppliers, organizations or other persons directly or indirectly employed by any of them. The Contractor's duties and responsibilities for safety and protection shall continue until the Work is deemed completed and is acceptable by the NJMC.

25.13 The Contractor shall be responsible for repairing any damage caused by his operations that could affect public health and safety, within four hours of the occurrence or the NJMC may have the repairs made by others at the expense of the Contractor. The Contractor shall repair all other damage expeditiously. Until such time as said other damage is repaired by the Contractor and approved by the NJMC, twice the amount of the cost estimate for the repairs will be withheld from the Contractor's progress payment.

25.14 In the event of an emergency affecting the safety or protection of persons, the Work, the site or adjacent property; the Contractor shall be responsible to act to prevent threatened damage, injury or loss without special instruction or approval from the NJMC.

25.15 The Contractor and his subcontractors shall protect the Work against any damage caused by the weather. If the NJMC determines that any portion of Work has been damaged or injured by a failure on the part of the Contractor or his subcontractors to protect the Work, it shall be repaired or removed and replaced at the expense of the Contractor.

25.16 The Contractor shall be responsible for proceeding with the Work and adhering to the progress schedule during all disputes or disagreements with the NJMC. No Work shall be delayed or postponed pending resolution of any disputes or disagreements.

25.17 If the Work is defective, the Contractor fails to supply sufficiently skilled workers, suitable materials or equipment or fails to furnish or perform the Work in a manner that will guarantee conformance with the Contract Documents, the NJMC may order the Contractor to stop the Work until the cause for such order has been eliminated. However, this right of the NJMC to stop the Work shall not give rise to any duty on the part of either to exercise this right for the benefit of the Contractor or any other party.

25.18 The Contractor shall maintain books, records, and other documents pertinent to the performance of the Work, in accordance with accepted accounting procedures and practices. The NJMC and/or any of their duly authorized representatives shall have access to such books, records, and other documents for the purpose of inspection, auditing, and copying.

The Contractor shall provide proper facilities for such access and inspection, and agrees to the disclosure of all information and reports resulting from access of the above records to any of the above agencies. Records shall be maintained and made available until three years from the date of final payment for the Project. Records which relate to any dispute, appeal, litigation or settlement of claims arising out of such performance (or costs or items to which an audit exception has been taken), shall be maintained and made available until three years after the date of the resolution of each dispute, appeal, litigation, claim or exception.

25.19 The Contractor shall constantly give his personal attention to the faithful prosecution of the Work and shall keep the Work under his personal control. The Contractor shall not sublet the Work as a whole or substantial part of the whole, without the previous written consent of the NJMC. The Contractor shall not assign any of the Work, or any monies payable under this Contract (or his claim thereto), without the written consent of the NJMC and the surety on the bond.

25.20 The Contractor shall take all necessary precautions to protect and preserve existing utilities and improvements during all phases of the Work. The Contractor shall be solely responsible for any damage or disturbance of any existing utilities and improvements, and shall restore them to their original condition, at no cost to the NJMC.

25.21 While performing the Work, the Contractor shall not encumber the premises with materials or equipment and shall keep the premises free from accumulations of waste materials. At the completion of the Work, the Contractor shall remove all waste and surplus materials, tools, equipment, and machinery and shall restore to original condition all property not designated for alteration by the Contract Documents.

25.22 The Contractor warrants and guarantees to the NJMC that all Work will be performed in accordance with the Contract Documents and that the completed Project will not be defectively or improperly installed. The Contractor agrees that all work improperly performed shall be remedied, all defective Work shall be repaired or replaced, and all improperly installed Work shall be reinstalled correctly in accordance with the Contract Documents.

25.23 Unless otherwise provided, the Contractor will be expected to accomplish all of the work for this project during normal working hours. No work shall be performed on Saturdays, Sundays, Holidays, or prior to 7:00 AM or after 5:00 PM on any normal working day without the permission of the NJMC. All work operations must comply with local ordinances. The contractor shall not interfere with the normal flow of traffic, reduce the number of lanes, or change any traffic pattern prior to 9:00AM or beyond 3:30 PM on all State roadways. The contractor shall not interfere with the normal flow of traffic, reduce the number of lanes, or change any traffic pattern prior to 9:00AM or beyond 4:30 PM on all local roadways.

26.0 PREVAILING WAGE ACT

26.1 The New Jersey Prevailing Wage Act, N.J.S.A. 34: 11-56.26 et seq. is hereby made part of every contract entered into on behalf of the State of New Jersey through the Division of Purchase and Property, except those contracts which are not within the contemplation of the Act. The Bidder's signature on this BID is his guarantee that neither he nor any subcontractors he might employ to perform the work covered by this BID has been suspended or debarred by the Commissioner, Department of Labor for violation of the provisions of the Prevailing Wage Act and/or the Public Works Contractor Registration Acts; the Bidder's signature on the BID is also his guarantee that he and any subcontractors he might employ to perform the work covered by this BID will comply with the provisions of the Prevailing Wage and Public Works Contractor Registration Acts, where required.

26.2 The Contractor shall be required to submit a certified payroll record to the owner within ten (10) days of the payment of the wages. The Contractor is also responsible for obtaining and submitting all subcontractors' certified payroll records within the aforementioned time period. The Contractor shall submit said certified payrolls in the form set forth in N.J.A.C. 12:60-6.1(c).

26.3 It is the Contractor's responsibility to obtain any additional copies of the certified payroll form to be submitted by contacting the New Jersey Department of Labor and Workforce Development, Division of Workplace Standards. Additional information is available at: www.state.nj.us/labor/lsse/lspubcon.html

Additional Federal wage requirements are included in the Appendix.

27.0 INSURANCE

27.1 The Bidder shall indemnify defend and hold harmless the NJMC and any of its employees, agents, against any loss, liability, claims or demands (including death and/or property damage) arising out of resulting, in whole or in part, from the Bidder's performance of this Contract.

27.2 All insurance that will be required to be maintained by the Bidder shall be in the amounts and for the coverage's specified herein. Insurance companies must be licensed to do business in the State of New Jersey.

27.3 **INSURANCE**: The Contractor shall furnish the NJMC with satisfactory proof that he/she has obtained the insurance described below from insurance companies or underwriters satisfactory to the NJMC. The Contractor shall keep such insurance in force until each and every obligation assumed under the Contract shall be fully and satisfactorily performed. The NJMC, shall be named as additional insured under all the policies, except the Compensation Insurance.

27.4 The Contractor shall furnish to the NJMC certificates for the following types of insurance showing the type, amount, and class of operations insured, and the effective and expiration dates of the policies. The certificates shall be submitted with the executed Contract(s). Work on the Contract will not be permitted to proceed until the certificate has been received and verified. Specific reference to the Contract shall be made in all policies.

27.4.1 **CONTRACTOR'S PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE**, including Independent Contractor's Completed Operations and Contractual Liability Insurance with combined single limits of not less than one million dollars ($1,000,000) each occurrence and with an annual aggregate of two million dollars ($2,000,000) with respect to bodily/personal injury and property damage. Said policies of insurance shall contain a provision or endorsement providing insurance protection against property damage caused by explosion or collapse; and against damage to or interference with other facilities.

27.4.2 **CONTRACTOR'S VEHICLE LIABILITY INSURANCE**, for "any auto/vehicle" for the duration of the contract for bodily injury/property damage with a combined single limit of one million dollars ($1,000,000).

27.4.3 **EXCESS LIABILITY INSURANCE**, in the amount of five million dollars ($5,000,000) is to be provided in addition to the above requirements.

27.4.4 **COMPENSATION INSURANCE, coverage "B",** as required by state law for all employees who will be engaged in the work associated with this Contract. The Contractor shall require all subcontractors to provide similar workmen's compensation insurance for all of their employees, unless those employees are covered under the Contractor's insurance. If any employees engaged in hazardous work under this Contract are not protected under the workmen's compensation statute; the Contractor (and any subcontractors) shall also provide adequate employer's liability insurance for the protection of these employees.

27.5 Subcontractors: The Contractor shall not permit any subcontractor to commence work on his subcontract until all similar insurance (as listed above) required of the subcontractor has been obtained and approved. Copies of all Subcontractors certificates are to be forwarded to the NJMC.

27.6 All insurance certificates shall stipulate that the insurance will not be changed or canceled without giving at least thirty (30) days written notice to the NJMC by certified mail.

28.0 NJMC RIGHT TO DEDUCT MONIES

28.1 The Contractor shall pay to the NJMC, and the NJMC shall have the right to deduct the full amount of all expenses, losses, damages, and costs, from all monies due, or to become due, the Contractor under this Contract for any defect, omission, or mistake of the Contractor or his employees, and the repairs of same, as determined by the NJMC.

29.0 FINANCIAL RECORDS

29.1 The Bidder and all subcontractors shall maintain their books, records, financial documents and all financial records relevant to the project pursuant to the Contract Documents in accordance with generally accepted accounting principles.

30.0 ETHICS STANDARDS

30.1 The Bidder must not pay, offer to pay, or agree to pay, either directly or indirectly, any fee, commission, compensation, gift, gratuity, or other thing of value of any kind to any NJMC employee, or agent as defined by N.J.S.A. 52:13D-13b. and N.J.S.A. 52:13D-13e., or to any member of the immediate family, as defined by N.J.S.A. 52:13D-13i., of any such officer or employee or agent, or any partnership, firm or corporation with which they are employed or associated, or in which such employee or agent has an interest within the meaning of N.J.S.A. 52:13D-13g.

31.0 AMERICANS WITH DISABILITIES ACT

31.1 The contractor must comply with all provisions of the Americans With Disabilities Act (ADA), P.L 101-336, in accordance with 42 U.S.C. 12101 et seq.

32.0 STOCKHOLDER DISCLOSURE

32.1 N.J.S.A. 52:25-24.2 provides that no corporation or partnership shall be awarded any contract for the performance of any work or the furnishing of any goods and services, unless, prior to the receipt of the Bid or accompanying the Bid of said corporation or partnership, Bidders shall submit a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own ten percent or more of its stock of any class, or of all

individual partners in the partnership who own a ten percent or greater interest therein. The included Statement of Ownership shall be completed and attached to the Bid proposal. This requirement applies to all forms of corporations and partnerships, including, but not limited to, limited partnerships, limited liability corporations, limited liability partnerships and Subchapter S corporations.

32.2 Failure to submit a stockholder disclosure document shall result in rejection of the Bid.

33.0 BUSINESS REGISTRATION

33.1 Effective September 1, 2004, pursuant to an amendment to N.J.S.A. 52:32-44, State and local entities (including the Division of Purchase and Property) are prohibited from entering into a contract with an entity unless the contractor has provided a copy of its business registration certificate (or interim registration) as part of its Bid submission. Failure to submit a copy of the Business Registration Certificate within the Bid proposal may be cause for rejection of the Bid proposal. The contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall, during the term of the contract, collect and remit to the Director of the Division of Taxation in the Department of the Treasury the use tax due pursuant to the "Sales and Use Tax Act, P.L. 1966, c. 30 (N.J.S.A. 54:32B-1 et seq.) on all their sales of tangible personal property delivered into the State. This requirement shall apply to all contracts awarded on and after September 1, 2004. Any questions in this regard can be directed to the Division of Revenue at (609) 292-1730. Form NJ-REG can be filed online at www.state.nj.us/treasury/revenue/busregcert.htm

34.0 THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT

34.1 The New Jersey Public Works Contractor Registration Act requires all contractors, subcontractors and lower tier subcontractors who Bid on or engage in any contract for public work as defined in N.J.S.A. 34:11-56.26 be first registered with the New Jersey Department of Labor and Workforce Development. Any questions regarding the registration process should be directed to the Division of Wage and Hour Compliance at (609) 292-9464 or http://www.nj.gov/labor/lsse/lspubcon.html.

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

BID DOCUMENT CHECK LIST

Required by NJMC	SUBMISSION REQUIREMENT	Initial each item submitted with the Bid (Bidder's Initials)
Name of Bidder:		
√	Bid Form	
√	Bid Bond (with Power of Attorney in the amount of 5% of the total Bid)	
√	Consent of Surety	
√	Acknowledgement of Receipt of Addenda	
√	Affirmative Action Compliance	
√	Disadvantaged Business Enterprise (DBE) Participation Form	
√	Ownership Disclosure Form, pursuant to N.J.S.A. 52:25-24.2	
√	Disclosure of Lobbying Activities, pursuant to 31 U.S.C. 1352	
√	Non-collusion Affidavit (form must be notarized)	
√	Bidder Corporate Resolution (form must be notarized)	
√	Affidavit of Authorization (form must be notarized)	
√	Moral Integrity Affidavit (form must be notarized)	
√	Set-off For State Tax for Contract	
√	Experience Affidavit	
√	Subcontractor Identification Form	
√	Bidder's and all subcontractor's Certificate (s) of Business Registration, pursuant to N.J.S.A. 52:32-44	
√	Bidder's and all subcontractor's Public Works Contractor Registration Certificate, pursuant to N.J.S.A. 34:11-56.25	
√	NJ MacBride Principles Form	
√	Review of NJMC and NJDOT Standard Specifications	

The following documents must be included in Bid package. The NJMC reserves the right to reject a Bid for failure to submit any of the following forms or documents.

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

BID FORM

This Bid will not be accepted after 10:00 AM, prevailing time, on **Monday, October 20, 2014**; at which time all BIDS received will be publicly opened and read. The Bidder agrees that this Bid will not be withdrawn for a period of sixty (60) calendar days after the closing time for receipt of BIDS.

The undersigned declares that this Bid is made without connection to any other person or persons making a Bid for the same Work, and is in all respects fair without collusion or fraud.

The undersigned has determined the quantity and quality of equipment and materials required, have investigated the location and determined sources of supply, have investigated labor conditions, and has arranged for the continuous prosecution of the Work of this Contract.

The undersigned agrees that the prices Bid shall apply to the actual quantities required, approved and used during the Work, including all Addenda.

The undersigned agrees to be bound by the award of the Contract, and if awarded the Contract, to execute the Contract, to furnish the required bonds and insurance certificates, and to furnish all other information required by the Contract Documents within the specified time limits.

The undersigned understands that the NJMC reserves the right to reject any and all BIDS, or waive any informality or technicality in any Bid, in the interest of the NJMC.

The Bidder understands that the quantities appearing in this Bid Form are approximate only and are prepared for the comparison of BIDS. The quantities of items may be increased or decreased as provided in the Contract Documents, and payment will be made for work completed at the original unit prices, in accordance with the Contract Documents.

In the event of discrepancy between the unit price for any pay item and the extended price shown for that item, the unit price is to govern. Where a unit price is Bid for an item, but no extended price is provided, the extended price shall be established by multiplying the unit price and the estimated quantity. Where the extended price is provided and the unit price is not provided, the unit price shall be established by dividing the extended price by the estimated quantity. Where no figure is provided for the unit price and extended price, the amount Bid will be considered to be zero ($0.00).

The undersigned hereby proposes and agrees to furnish all the labor, material, equipment, tools and services necessary to perform the specified Work, in accordance with the above referenced contract.

The undersigned has examined the Contract Documents, and the location of the proposed Work, and is familiar with the local conditions at the place where the Work is to be performed. The Bidder understands that information relative to any existing structures , apparent and latent conditions, and natural phenomena as furnished in the Contract Documents or by the NJMC, carries no guarantee, expressed or implied, as to its completeness or accuracy, and has made all allowances therefore.

The undersigned agrees to perform all of the Work described in the Contract Documents, provide all labor, equipment, and materials necessary for the completion of this Contract. The undersigned further agrees to complete all work as specified and shown to a fully acceptable condition for the following Total Contract Price:

BID FORM (PART ONE)					
PAY ITEM	**DESCRIPTION**	**QUANTITY**	**UNIT**	**UNIT PRICE (DOLLARS & CENTS)**	**TOTAL (DOLLARS & CENTS)**
101	Maintenance and Protection of Traffic	1	LS		
102	Police Traffic Control	500	Hrs.		
111	Performance and Payment Bond	1	LS		
112	Maintenance Bond	1	LS		
210	Vehicle Detection Unit Installation	55	UNIT		
221	Vehicle Detection Cable, 3/C # 14	11,000	LF		
234	Travel Time System Installation	6	UNIT		
241	Removal of Existing Vehicle Detection Unit	25	UNIT		
243	Adjust Angle of Existing Image Detection Unit	10	UNIT		
244	Relocate Existing Image Detection Unit	5	UNIT		
302	Antenna / Transceiver Assembly Installation	26	UNIT		
311	Ethernet Cable, Cat 5e	12,000	LF		
504A	Traffic Signal Cabinet, Type P	3	UNIT		
504B	Traffic Signal Cabinet, Type K	2	UNIT		
601	1 1/2" Rigid Metal Conduit	35	LF		
602	2" Rigid Metal Conduit	300	LF		
603	3" Rigid Metal Conduit	600	LF		
611	18"x36" Junction Box	9	UNIT		
612	Meter Cabinet, Type T	7	UNIT		
613	Foundation, Type SFK	2	UNIT		
614	Foundation, Type MCF	6	UNIT		
616	Traffic Signal Mast Arm, Aluminum	4	UNIT		
617	Foundation, Type SFT	6	UNIT		

BID FORM (PART ONE, CONTINUED)					
PAY ITEM	**DESCRIPTION**	**QUANTITY**	**UNIT**	**UNIT PRICE (DOLLARS & CENTS)**	**TOTAL (DOLLARS & CENTS)**
618	Traffic Signal Standard, Aluminum, Type K	2	UNIT		
619	Traffic Signal Standard, Aluminum, Type T	6	UNIT		
620	Traffic Signal Head, 12"	5	UNIT		
621	Service Wire, No. 6 AWG	1600	LF		
622	Traffic Signal Cable, 2 Conductor	300	LF		
623	Traffic Signal Cable, 5 Conductor	300	LF		
624	Traffic Signal Cable, 10 Conductor	1000	LF		
625	Ground Wire, No. 8 AWG	500	LF		
626	Push Button	10	UNIT		
631	9"x18" Concrete Vertical Curb	50	LF		
632	Concrete Sidewalk, 4" Thick	50	SY		
633	Full Depth Concrete Pavement Repair, HMA	50	SY		
641	Topsoiling, 2" Thick	100	SY		
642	Fertilizing and Seeding	100	SY		
643	Straw Mulching	100	SY		
654	Traffic Signal Cabinet Skirt, 18"	3	UNIT		
703	Fiber Optic Cable, Type C (24 Fibers)	200	LF		
705	Fiber Optic Cable, Type E (12 Fibers)	4000	LF		
711	Fiber Optic Patch Panel (12 Port)	15	UNIT		
711C	Fiber Optic Patch Panel (24 port)	1	UNIT		
712	Fiber Optic Splice Enclosure	13	UNIT		
723	4" PVC Multiduct Conduit	100	UNIT		
741A	Fiber Optic Cabinet Single Door, Double Sided	1	UNIT		

BID FORM (PART ONE, CONTINUED)					
PAY ITEM	**DESCRIPTION**	**QUANTITY**	**UNIT**	**UNIT PRICE (DOLLARS & CENTS)**	**TOTAL (DOLLARS & CENTS)**
742	Foundation ITS Type A	1	UNIT		
743	Junction Box ITS Type A	2	UNIT		
744	Meter Cabinet ITS	1	UNIT		
745	Foundation ITS Type MC	1	UNIT		

BID FORM (PART TWO)

TOTAL BID AMOUNT

_____

(Amount in Numbers)

_____

(Amount in Words)

If this Bid shall be accepted by the NJMC, and the Bidder shall fail to enter into the Contract as aforesaid, then the NJMC shall be entitled to recover from the Bidder those monies as specified in SECTION 5.0 GENERAL INSTRUCTIONS.

Name of Contractor _____

Business Address _____

_____

Business Telephone Number _____

IF A CORPORATION:

Incorporated Under the Laws of the State of _____

Signature of Bidder _____

Title of Bidder _____

Dated _____

Name of President _____

Name of Secretary _____

Name of Treasurer _____ Affix Corporate Seal Here

IF A PARTNERSHIP, INDIVIDUAL OR NON-INCORPORATED ORGANIZATION:

Signature of Bidder _____

Title of Bidder _____

Date _____

STATE OF NEW JERSEY

NEW JERSEY MEADOWLANDS COMMISSION

BID BOND

All Bidders are required to submit a Bid Bond in the amount of 5% of the Total Bid. A valid and effective Power of Attorney authorizing the Attorney-in-Fact to execute the Bid Bond on behalf of the Surety for the full amount of the Bid Bond must accompany the Bid Bond.

KNOW BY ALL MEN BY THESE PERSENTS, that the Bidder, hereinafter called the Principal:

Principal Name: _____

Principal Address: _____

And the Surety:

Surety Name: _____

Surety Address:_____

_____

A corporation duly organized under the laws of the State of _____ are held and firmly bound onto New Jersey Meadowlands Commission , in the Penal Sum of

_____

(BID BOND – AMOUNT IN WORDS)

_____

(BID BOND – AMOUNT IN NUMBERS)

That for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the New Jersey Meadowlands Commission a Bid, attached hereto and made a part hereof to enter into a Contract in writing for the following project:

Meadowland Adaptive Signal System for Traffic Reduction (MASSTR)

NOW, THERFORE,

If said Bid shall be accepted and the principal shall execute and deliver a Contract in the form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for the faithful performance of said Contract, and for the prompt payment of all persons performing labor or furnishing materials in the connection therewith, and shall in all other respect perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the NJMC may accept such Bid; and Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seal, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth below.

SIGNED AND SELAED this _____day of_____20_____

_____ (seal)
PRINCIPAL

_____ _____
WITNESS TITLE

_____ (seal)
SURETY

_____ _____
WITNESS TITLE

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

CONSENT OF SURETY

A Performance and Payment Bond will be required from the successful Contractor on this project, and consequently, all Bidders shall submit, with their Bid, a consent of surety in substantially the following form:

To: **New Jersey Meadowlands Commission**

Re: _____
(Contractor)

_____
(Project Description)

This is to certify that the _____
(Surety Company)

Will provide to the **New Jersey Meadowlands Commission** a Performance and Payment Bond (PPB) within 14 days of the date of Notice of Award in the full amount of the Total Bid Price less the cost of obtaining the PPB as listed in the Bid Form, in the event that said Bidder is awarded a contract for the above project.

_____
(CONTRACTOR)

_____
(Authorized Agent of Surety Company)

Date: _____

Consent of surety must be signed by an authorized agent or representative of a surety company and not by the individual or company representative submitting the Bid.

A valid and effective Power of Attorney authorizing the Attorney-in-Fact to execute the Consent of Surety on behalf of the Surety for the full amount of the Bid Price must accompany the Consent Surety.

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Dated	Acknowledge Receipt (initial)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

☐**No addenda were received**:

Acknowledged for: _____
(Name of Bidder)

By: _____
(Signature of Authorized Representative)

Name: _____
(Print or Type)

Title: _____

Date: _____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

AFFIRMATIVE ACTION COMPLIANCE

This form is a summary of the successful Bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

The successful Bidder shall submit to the NJMC, after notification of award but prior to execution of this contract, one of the following two documents as forms of evidence:

(a) A photocopy of a valid letter that the Contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

After notification of award, but prior to signing the contract, the contractor shall submit to the NJMC and the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division) an Initial Project Workforce Report (Form AA-201) provided to the NJMC by the Division for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7.

The contractor shall also submit a copy of the Monthly Project Workforce Report (Form AA-202) once a month thereafter for the duration of the contract to the Division and to the NJMC compliance officer. The contractor shall also cooperate with the NJMC in the payment of budgeted funds, as is necessary, for on-the job and/or off-the-job programs for outreach and training of minorities and women.

COMPANY: _____SIGNATURE: _____

PRINT NAME: _____TITLE: _____

DATE: _____

Note: This notice must be completed, signed and returned with your signed contract.

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

DISADVANTAGE BUSINESS ENTERPRISE (DBE) PARTICIPATION

DBE Classification	Name and Address of DBE Contractor	Type of Work or Items or Parts Thereof to be Performed	Projected Commencement and Completion Date for Work	Actual Dollar Amount of Subcontract Work

Classification Categories:

S – Subcontractor subcontractor (100% credit)
M - Manufacturer (100% credit)
RD/S - Regular Dealer/Supplier (60% credit)
RD/I - Regular Dealer/Installer (100% credit)
T/H - Trucker/Hauler (100% credit)
EL - Equipment Lessor (100% credit)

Notes:
1. A Regular Dealer/Supplier must maintain inventory and/or own or operate distribution equipment.
2. Prime contractor will not receive credit for DBE broker participation.

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

STATE OF NEW JERSEY -- DIVISION OF PURCHASE AND PROPERTY OWNERSHIP DISCLOSURE FORM

Solicitation Number: _____ **Bidder/Offeror:** _____

PART 1: PLEASE COMPLETE THE QUESTIONS BELOW BY CHECKING EITHER THE "YES" OR "NO" BOX.
ALL PARTIES ENTERING INTO A CONTRACT WITH THE STATE ARE REQUIRED TO COMPLETE THIS FORM PURSUANT TO N.J.S.A. 52:25-24.2
PLEASE NOTE: IF THE BIDDER/OFFEROR IS A NON-PROFIT, THIS FORM IS NOT REQUIRED. PLEASE COMPLETE THE SEPARATE DISCLOSURE OF INVESTIGATIONS FORM.

	YES	NO
1. Are there any individuals, corporations or partnerships owning a **10% or greater** interest in the bidder/offeror?	☐	☐

IF THE ANSWER TO QUESTION 1 IS NO, PLEASE SIGN AND DATE THE FORM. YOU DO NOT HAVE TO COMPLETE ANY MORE QUESTIONS ON THIS FORM. IF THE ANSWER TO QUESTION 1 IS YES, PLEASE ANSWER QUESTIONS 2-4 BELOW.

2. Of those parties owning a 10% or greater interest in the bidder/offeror, are any of those parties **individuals**?	☐	☐
3. Of those parties owning a 10% or greater interest in the bidder/offeror, are any of those parties **corporations or partnerships**?	☐	☐
4. If your answer to Question 3 is "YES", are there any parties owning a **10% or greater** interest in the corporation or partnership referenced in Question 3?	☐	☐

IF ANY OF THE ANSWERS TO QUESTIONS 2-4 ARE YES, PLEASE PROVIDE THE REQUESTED INFORMATION IN PART 2 BELOW.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO QUESTIONS 2-4 ANSWERED AS "YES".

For Questions 2-4 answered "YES", you **must** disclose identifying information related to the individuals, partnerships and/or corporations owning a 10% or greater interest in the bidder/offeror. Further, if one or more of these entities is itself a corporation or partnership, you must also disclose all parties that own a 10% or greater interest in that corporation or partnership. This information is required by statute.

TO COMPLETE PART 2, PLEASE PROVIDE THE REQUESTED INFORMATION PERTAINING TO EITHER INDIVIDUALS OR PARTNERSHIPS/CORPORATIONS HAVING A 10% OR GREATER INTEREST IN THE BIDDER/OFFEROR. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, CLICK THE "ADD AN ENTRY" BUTTON IN THE APPROPRIATE ENTITY TYPE.

Individuals

Name: _____ **Date of Birth:** _____

Office Held: _____ **Ownership Interest** _____ %

Home Address: _____

City _____ **State** _____ **Zip Code** _____

Are there **additional** entities holding **10% or greater** ownership interest in the bidder/offeror and its parent corporation/partnership?

☐ Yes or ☐ No

Delete Entry

Add An Additional Individuals Entry

Partnerships/Corporations

Entity Name: _____

Partner Name: _____ **Ownership Interest** _____ %

Business Address: _____

City _____ **State** _____ **Zip Code** _____

Delete Entry

Are there **additional** entities holding **10% or greater** ownership interest in the bidder/offeror and its parent corporation/partnership?

☐ Yes or ☐ No

Add An Additional Partnerships/Corporations Entry

ONCE YOU HAVE IDENTIFIED ALL PARTIES HAVING A 10% OR GREATER OWNERSHIP INTEREST IN THE BIDDER/OFFEROR AND ITS PARENT CORPORATION/PARTNERSHIPS, PLEASE SIGN AND DATE BELOW AND PROCEED TO THE DISCLOSURE OF INVESTIGATIONS FORM.

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ Signature: _____

Title: _____ Date: _____

FEIN/SSN: _____

ALL BIDDER/OFFERORS MUST COMPLETE THE DISCLOSURE OF INVESTIGATIONS FORM

STATE OF NEW JERSEY -- DIVISION OF PURCHASE AND PROPERTY
DISCLOSURE OF INVESTIGATIONS AND OTHER ACTIONS INVOLVING BIDDER FORM

Solicitation Number: _____ **Bidder/Offeror:** _____

PART 1: PLEASE COMPLETE THE QUESTIONS BELOW BY CHECKING EITHER THE "YES" OR "NO" BOX.

PLEASE REFER TO THE PERSONS AND/OR ENTITIES LISTED ON YOUR OWNERSHIP DISCLOSURE FORM WHEN ANSWERING THE QUESTIONS BELOW.

NON-PROFIT ENTITIES: PLEASE LIST ALL OFFICERS/DIRECTORS IN PART 2 OF THIS FORM. YOU WILL BE REQUIRED TO ANSWER THE QUESTIONS BELOW WITH RESPECT TO THESE INDIVIDUALS.

		YES	NO
1.	Has any person or entity listed on this form or its attachments ever been arrested, charged, indicted, or convicted in a criminal or disorderly persons matter by the State of New Jersey (or political subdivision thereof), any other state or the U.S. Government?	☐	☐
2.	Has any person or entity listed on this form or its attachments ever been suspended, debarred or otherwise declared ineligible by any government agency from bidding or contracting to provide services, labor, materials or supplies?	☐	☐
3.	Are there currently any pending criminal matters or debarment proceedings in which the firm and/or its officers and/or managers are involved?	☐	☐
4.	Has any person or entity listed on this form or its attachments been denied any license, permit or similar authorization required to engage in the work applied for herein, or has any such license, permit or similar authorization been revoked by any agency of federal, state or local government?	☐	☐

IF ANY OF THE ANSWERS TO QUESTIONS 1-4 ARE YES, PLEASE PROVIDE THE REQUESTED INFORMATION IN PART 2 BELOW.
IF ALL OF THE ANSWERS TO QUESTIONS 1-4 ARE NO, PLEASE READ AND SIGN THE FORM BELOW. NO FURTHER ACTION IS NEEDED.
IF YOU ARE A NON-PROFIT, YOU MUST DISCLOSE ALL OFFICERS/DIRECTORS IN PART 2 BELOW.

PART 2: PROVIDING ADDITIONAL INFORMATION

For Questions 1-4 answered "YES", you **must** provide a detailed description of any investigation or litigation, including but not limited to administrative complaints or other administrative proceedings, involving public sector clients during the past 5 years. This description must include the nature and status of the investigation, and for any litigation, the caption of the action, a brief description of the action, the date of inception, current status, and if applicable, disposition. Please provide this information in the box labeled "Additional Information" below. The box will prompt you to provide the information referenced above. Please provide thorough answers to each question. Click on the "Add Additional Information" button below the box if you need to make additional entries.

Non-profit bidder/offerors must disclose the individuals serving as officers or directors for purposes of this form. Please indicate all individuals acting in either capacity by providing the information located in the "Officers/Directors" box. If additional entries are needed, click the "Add an Officer/Director Entry" button.

Once all required information has been disclosed, please sign and date below

Additional Information

Person or Entity _____ **Date of Inception:** _____

Current Status _____

Brief Description _____

Caption of Action (if applicable) _____ **Disposition of Action (if applicable)** _____

Bidder/Offeror Contact Name _____

Contact Phone Number _____

Delete Entry

Add Additional Information

Officers/Directors

Name: _____

Title _____ **DOB** _____

Address _____

City _____ **State** _____ **Zip Code** _____

Phone _____ **E-Mail** _____

Delete Entry

Add An Additional Officer/Director Entry

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ **Signature:** _____

Title: _____ **Date:** _____

State of New Jersey
Division of Purchase and Property
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Solicitation Number: _____ **Bidder/Offeror:** _____

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that the person or entity, or one of the person or entity's parents, subsidiaries, or affiliates, is not identified on a list created and maintained by the Department of the Treasury as a person or entity engaging in investment activities in Iran. If the Director finds a person or entity to be in violation of the principles which are the subject of this law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the person or entity.

I certify, pursuant to Public Law 2012, c. 25, that the person or entity listed above for which I am authorized to bid/renew:

☐ is not providing goods or services of $20,000,000 or more in the energy sector of Iran, including a person or entity that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran, **AND**

☐ is not a financial institution that extends $20,000,000 or more in credit to another person or entity, for 45 days or more, if that person or entity will use the credit to provide goods or services in the energy sector in Iran.

In the event that a person or entity is unable to make the above certification because it or one of its parents, subsidiaries, or affiliates has engaged in the above-referenced activities, a detailed, accurate and precise description of the activities must be provided in part 2 below to the Division of Purchase and Property under penalty of perjury. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

EACH BOX WILL PROMPT YOU TO PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS. PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, CLICK THE "ADD AN ADDITIONAL ACTIVITIES ENTRY" BUTTON.

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____

_____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name _____ Contact Phone Number _____

ADD AN ADDITIONAL ACTIVITIES ENTRY

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ Signature: _____

Title: _____ Date: _____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:	**2. Status of Federal Action:**	**3. Report Type:**
[ ] a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	[ ] a. bid/offer/application b. initial award c. post-award	[ ] a. initial filing b. material change **For Material Change Only:** year _____ quarter _____ date of last report _____

4. Name and Address of Reporting Entity: ☐ **Prime** ☐ **Subawardee** Tier _____, *if known*: **Congressional District**, *if known*: 4c	**5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:** **Congressional District**, *if known*:
6. Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, *if applicable*: _____
8. Federal Action Number, *if known*:	**9. Award Amount,** *if known*: $
10. a. Name and Address of Lobbying Registrant (*if individual, last name, first name, MI*):	**b. Individuals Performing Services** (*including address if different from No. 10a*) (*last name, first name, MI*):
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____
Federal Use Only:	Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

NON-COLLUSION AFFIDAVIT

STATE OF _____
ss:
COUNTY OF _____

I, _____, of the _____ of

_____ in the County of _____ and the State of

_____, of full age, being duly sworn according to law, on my oath depose and say that:

I am (NAME) _____ in the firm of

_____, the Bidder making the Bid for this Contract;

I execute the said Bid with full authority to do so;

Said Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action to restrain free, competitive bidding in connection with the above named Project; and,

All statements contained in said Bid, and in this affidavit, are true, correct, and made with the full knowledge that the NEW JERSEY MEADOWLANDS COMMISSION relies upon the truth of the statements contained in the Bid and this affidavit in awarding the Contract for the Project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by

_____.
(Name of Bidder)

(N.J.S.A. 52:34-15)

Subscribed and sworn to
before me this _____day
of _____ 20 _____.

_____
(Type or print name of affiant under signature)

_____
(Notary Public)
My commission expires _____ 20_____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

CORPORATE RESOULTION FORM

BE IT RESOLVED, By the Board of Directors of _____ that the president (_____) be and hereby is authorized to make, execute and deliver a contract FOR: Meadowlands Adaptive Signal System for Traffic Reduction, with the NEW JERSEY MEADOWLANDS COMMISSION and that the Secretary (_____) be and hereby is authorized to attest to the execution of the same and affix the corporate seal thereto.

_____

_____

_____

BOARD OF DIRECTORS

_____

SECRETARY (SEAL)

I HEREBY CERTIFY that the foregoing is an exact copy of a Resolution by the BOARD of Directors of (_____) adopted at a (_____) , meeting held on _____ at which quorum was present.

IN WITNESS WHEREOF, I have herunto set my hand and the seal of (_____)

this _____day of _____ 20___.

_____

SECRETARY

(SEAL)

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

AFFIDAVIT OF AUTHORIZATION

State of _____
ss:
County of _____

_____, being duly sworn, deposes and says that he resides at _____, that he is the (TITLE) _____ who signed the Bid for this Contract, that he was duly authorized to sign, that the Bid is a true offer of the Bidder, that the seal attached is the seal of the Bidder, and that all declarations and statements contained in the Bid are true to the best of his knowledge and belief.

_____
(Type or print name of affiant
under signature)

Subscribed and sworn to
before me this _____ day
of _____ 20_____.

_____
(Notary Public)

My commission expires _____, 20_____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

MORAL INTEGRITY AFFIDAVIT

STATE OF _____

ss:

COUNTY OF _____

I, _____, the (TITLE) _____

of (COMPANY) _____, hereinafter called the Bidder, being first duly

sworn; deposes and says that:

1. The Bidder has submitted a Bid to the NEW JERSEY MEADOWLANDS COMMISSION regarding this Contract on _____.

2. The Bidder wishes to demonstrate moral integrity to the satisfaction of the New Jersey Meadowlands Commission.

3. As of the date of signing this affidavit, neither the Bidder, not any of his owners, officers, or directors are involved in any federal, state of other governmental investigations concerning criminal or quasi-criminal violations, except as follows (if none, so state):
   _____

   _____

   _____

4. Neither the Bidder nor any of his owners, officers or directors have ever committed any violation of a federal or state or quasi-criminal statute, except as follows (if none, so state):
   _____.

5. The Bidder is incorporated in the State of _____.

6. If the answer to question #5 is other than New Jersey, that the Bidder has received from the Secretary of the State of New Jersey, a certificate authorizing the corporation to conduct business in New Jersey.

7. The names and addresses of the principals, shareholders and officers of the Bidder are as follows:
   _____

   _____

MORAL INTEGRITY AFFIDAVIT (Continued)

_____

_____

_____

_____

(Use additional sheets, as required)

8. He is personally acquainted with the operations of the Bidder, has full knowledge of the factual basis comprising the contents of this Affidavit, and knows the contents are true.

9. This Affidavit is made to the NEW JERSEY MEADOWLANDS COMMISSION to accept the Bid for this Contract, knowing that the NEW JERSEY MEADOWLANDS COMMISSION relies upon the truth of the statements contained herein.

_____
(Bidder)

_____
(Type of print name of affiant under signature)

Subscribed and sworn to
before me this _____ day
of _____ 20_____.

_____
(Notary Public)

My commission expires _____, 20_____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

SET-OFF FOR STATE TAX FOR CONTRACT

Please be advised that , pursuant to P.L., 1995 c. 159, effective January 1, 1996, and notwithstanding any provisions of the law to the contrary, whenever any taxpayer, partnership of S corporation under contract to provide goods and services or construction projects to the state of New Jersey or its agencies or instrumentalities, including the legislative and judicial branches of State government, is entitled to payment for those goods or services at the same time a taxpayer, partner or shareholder of that entity is indebted for any State tax, the Director of the Division of Taxation shall seek to set off that taxpayer's or shareholder's share of the payment due the taxpayer, partnership or S. corporation. The amount of the set off shall not allow for the deduction of expenses or other deductions which might be attributable to the taxpayer, partner or shareholder subject to set-off under this act.

The Director of the Division of Taxation shall give notice of the set-off to the taxpayer and provide an opportunity for a hearing within 30 days of such notice under the procedures for protest established under R.S. 54:49-18. No requests for conference, protest, or subsequent appeal to the Tax Court from any protest under this section shall stay the collection of the indebtedness. Interest that may be payable to the State, pursuant to P.L. 1987, c. 184 (c. 52:32-32 et seq). to the taxpayer shall be stayed.

"I HAVE BEEN ADVISED OF THIS NOTICE"

Company: _____

Signature: _____

Print or Type Name of Signer: _____

Print or Type Title of Signer: _____

Date: _____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

EXPERIENCE AFFIDAVIT

The Bidder shall state below, or on sheets to be attached, at least (3) projects he has completed which were similar to this Contract, and during which the products specified herein were used. The information required below shall include the title of the contract; the NJMC's name, address, and telephone number; and the dollar value of work completed. This information will assist the NEW JERSEY MEADOWLANDS COMMISSION in judging the Bidder's experience, skill, and business standing.

_____

_____

_____

_____

_____

_____

_____

_____

The undersigned is (an Individual, a Partnership, a Corporation) under the laws of the State of _____, and having principal offices at

_____.

(Signed) _____

(Address) _____

_____

(Date) _____ 20_____

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

SUBCONTRACTOR IDENTIFICATION FORM

Furnish below the company name, address, telephone number, and name of contact person for each subcontractor, if any, to be used in the performance of the Work for this Contract. Experience statements shall be attached hereto for each subcontractor.

(If no work will be subcontracted, indicate NONE).

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

PB-MP.1 R10/2011

MACBRIDE PRINCIPLES FORM

BIDDER'S REQUIREMENT: TO PROVIDE A CERTIFICATION IN COMPLIANCE WITH MACBRIDE PRINCIPLES AND NORTHERN IRELAND ACT OF 1989

Pursuant to Public Law 1995, c. 134, a responsible bidder selected, after public bidding, by the Director of the Division of Purchase and Property, pursuant to N.J.S.A. 52:34-12, or the Director of the Division of Building and Construction, pursuant to N.J.S.A. 52:32-2, must complete the certification below by checking one of the two representations listed and signing where indicated. If a bidder who would otherwise be awarded a purchase, contract or agreement does not complete the certification, then the Directors may determine, in accordance with applicable law and rules, that it is in the best interest of the State to award the purchase, contract or agreement to another bidder who has completed the certification and has submitted a bid within five (5) percent of the most advantageous bid. If the Directors find contractors to be in violation of the principles which are the subject of this law, they shall take such action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

I certify, pursuant to N.J.S.A. 52:34-12.2 that the entity for which I am authorized to bid:

☐ has no ongoing business activities in Northern Ireland and does not maintain a physical presence therein through the operation of offices, plants, factories, or similar facilities, either directly or indirectly, through intermediaries, subsidiaries or affiliated companies over which it maintains effective control; or

☐ will take lawful steps in good faith to conduct any business operations it has in Northern Ireland in accordance with the MacBride principles of nondiscrimination in employment as set forth in N.J.S.A. 52:18A-89.8 and in conformance with the United Kingdom's Fair Employment (Northern Ireland) Act of 1989, and permit independent monitoring of their compliance with those principles.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature: _____

Print Name: _____

Title: _____

Firm Name: _____

Date: _____

Meadowlands Adaptive Signal System for Traffic Reduction

MASSTR

Phase Five Contract

October 2014

Prepared By

New Jersey Meadowlands Commission

P.O. Box 640, One DeKorte Park Plaza, Lyndhurst New Jersey 07071

www.njmeadowlands.gov

STATE OF NEW JERSEY

NEW JERSEY MEADOWLANDS COMMISSION

CONTRACT DOCUMENT CHECK LIST

REQUIRED BY NJMC	SUBMISSION REQUIREMENT
√	Performance Bond
√	Payment Bond
√	Public Liability and Property Damage Insurance Certificate
√	Vehicle Liability Insurance Certificate
√	Excess Liability Insurance Certificate
√	Compensation Insurance Certificate
√	Letter of Federal Affirmative Action Plan Approval; or Certificate of Employee Information Report
√	Initial Project Workforce Report (Form AA-201)
√	Signed and Completed Contract

STATE OF NEW JERSEY
NEW JERSEY MEADOWLANDS COMMISSION

CONTRACT

This Contract, effective on the latest date of signature at the last page, by and between the New Jersey Meadowlands Commission, P.O. Box 640, One DeKorte Park Plaza, Lyndhurst, New Jersey, 07071, hereinafter called the NJMC, the party of the first part, and:

_____

hereinafter called the Contractor, the party of the second part.

WITNESSETH, that whereas the NJMC intends it to have the Contractor construct, wire, and install the NJMC MASSTR PHASE FIVE hereinafter called the Project or the Work, in accordance with the Plans, Specifications, and other Contract Documents.

NOW, THEREFORE, the NJMC and the Contractor, in exchange for the mutual consideration set forth herein, agree as follows:

1.0 PARTS OF CONTRACT

1.1 The parties agree that the conditions contained in the following documents which comprise and are hereinafter called the Contract Documents are made part of this Contract and are binding on both parties as if all conditions contained in the Contract Documents were set forth in this Contract:

1.1.1 Advertisement for BIDS
1.1.2 General Instructions
1.1.3 Forms
1.1.4 Contract Documents
1.1.5 Specifications
1.1.6 Plans
1.1.7 Addenda
1.1.8 Change Orders

2.0 SCOPE OF WORK

2.1 The contractor shall furnish all labor, materials, equipment, tools, and services necessary to construct, wire, and install all the components (e.g. traffic poles, pole extensions, cameras, transceivers, antennas, etc.) necessary for a fully operational adaptive traffic signal control system for twenty one (21) traffic signals located in the Township of North Bergen and the Town of Secaucus in Hudson County, the Boroughs of Little Ferry, Moonachie, Teterboro, and Hasbrouck Heights, the Townships of Lyndhurst and South Hackensack, and the Village of Ridgefield Park in Bergen County New Jersey.

2.2 Due to the current NJDOT and NJ Transit construction activities that are happening within the Project area, some of the locations may not be available for immediate construction upon NTP. Estimated availability timeline is shown as below. Once a location becomes available for work to commence it shall be completed within 120 consecutive weekdays/work days.

Location #	Intersection	Municipality	Jurisdiction	Estimated Availability Timeline
308	Liberty St & Washington Ave	Little Ferry	Bergen	Upon NTP
308a	Liberty-Moonachie Repeater	Little Ferry	Bergen	Upon NTP
309	Liberty St & Main St	Little Ferry	Little Ferry	Upon NTP
309a	Liberty St Repeaters	Little Ferry	Bergen	Upon NTP
310	Washington Ave & Josheph St	Moonachie	Bergen	Upon NTP
310a	Moonachie Repeater	Moonachie	Bergen	Upon NTP
401	Industrial Ave & Teterboro Landing (Proposed)	Teterboro	Teterboro	Upon NTP
504	Westside Ave & 69th St	North Bergen	North Bergen	**June 2016**
505	69th St & Anpesil Dr	North Bergen	North Bergen	**June 2016**
615	Meadowlands Pkwy & Wood Ave (Proposed)	Secaucus	Secaucus	**June 2016**
911	Orient Way & Page Ave	Lyndhurst	Bergen	Upon NTP
912	Orient Way & Marin Ave	Lyndhurst	Lyndhurst	Upon NTP
913	Orient Way & Valley Brook Ave	Lyndhurst	Lyndhurst	Upon NTP
926	NJ 17 & Williams Ave	Hasbrouck Heights	NJDOT	**June 2016**
930	US 46 WB Ramps & Green (Proposed)	Teterboro	NJDOT	**June 2016**
931	US 46 EB Ramps & Green (Proposed)	Teterboro	NJDOT	**June 2016**
932	US 46 & Industrial Ave	Teterboro	NJDOT	Upon NTP
933	US 46 & Fred Wehran Dr/Hulyer St	Teterboro	NJDOT	**June 2016**
934	US 46 & Phillips Ave	South Hackensack	NJDOT	**June 2016**
935	US 46 & Liberty St	Little Ferry	NJDOT	**June 2016**
936	US 46 & Grand St	Little Ferry	NJDOT	**June 2016**
937	US 46 & Bergen Tpk	Little Ferry	NJDOT	**June 2016**
938	Bergen Tpk & Lakeview Ave	Little Ferry	Bergen	**June 2016**
939	US 46 & Ridgefield Ave	Ridgefield	NJDOT	Upon NTP
940	US 46 & Laurel St	Ridgefield	NJDOT	Upon NTP

3.0 THE CONTRACT SUM

The NJMC shall pay the Contractor for the performance of the Work, based on the Bid prices, an amount not to exceed:

$_____
(Amount in Numbers)

_____
(Amount in Words)

4.0 TIME FOR COMPLETION:

4.1 Work under this Contract shall be completed within 150 consecutive week days/work days, weather permitting, from the date specified in the Notice to Proceed.

5.0 CONTRACTORS

5.1 The Contractor shall have sole responsibility for the complete effort specified in the contract. Payment will be made only to the Contractor. The Contractor shall have sole responsibility for all payments due to

any subcontractor. The Contractor is responsible for the professional quality, technical accuracy and timely completion and submission of all deliverables, services or commodities required to be provided under the contract. The Contractor shall, without additional compensation, correct or revise any errors, omissions, or other deficiencies in its deliverables and other services. The approval of deliverables furnished under this contract shall not in any way relieve the Contractor of responsibility for the technical adequacy of its work. The review, approval, acceptance or payment for any of the services shall not be construed as a waiver of any rights that the State may have arising out of the Contractor's performance of this contract.

6.0 SUBCONTRACTORS

6.1 The Contractor agrees to bind every subcontractor by the terms of the Contract Documents. The Contract Documents shall not be construed as creating any contractual relations between any subcontractor and the NJMC. Relations between the Contractor and subcontractors are further defined in the General Instructions.

7.0 SUBSTITUTION OR ADDITION OF SUBCONTRACTOR(S)

7.1 This Subsection serves to supplement but not to supersede Section 3.11 of the NJ Standard Terms and Conditions version 05/13/2010 located on the Advertised Solicitation, Current BID Opportunities webpage. If it becomes necessary for the Contractor to substitute a subcontractor, add a subcontractor or substitute its own staff for a subcontractor, the Contractor will identify the proposed new subcontractor or staff member(s) and the work to be performed. The Contractor must provide detailed justification documenting the necessity for the substitution or addition. The Contractor must provide detailed resumes of its proposed replacement staff or of the proposed subcontractor's management, supervisory and other key personnel that demonstrate knowledge, ability and experience relevant to that part of the work which the subcontractor is to undertake. The qualifications and experience of the replacement(s) must equal or exceed those of similar personnel proposed by the Contractor in its BID. The Contractor shall forward a written request to substitute or add a subcontractor or to substitute its own staff for a subcontractor to the State Contract Manager for consideration. If the State Contract Manager approves the request, the State Contract Manager will forward the request to the Director for final approval.

8.0 WORK

8.1 The Contractor agrees to furnish all the necessary labor, materials, equipment, tools, and services necessary to perform and complete all work required for the construction of the Project, in strict compliance with the Contract Documents herein mentioned, which are hereby made a part of the Contract, including the following Addenda:

ADDENDUM No.	DATE
_____	_____
_____	_____
_____	_____

9.0 PRICES OF WORK

9.1 The NJMC will pay based on the prices in the Bid, and the Contractor shall receive the prices stipulated in the Bid as full compensation for everything furnished and done by the Contractor under this Contract, including all work required but not specifically mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for all risks of every description connected with the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work as herein specified, and

for well and faithfully completing the work and the whole thereof, as herein provided. If and where directed items will only be paid if they are determined to be necessary by the NJMC.

10.0 AVAILIBILITY OF FUNDS

10.1 The NJMC's obligation to pay the Contractor is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the NJMC for payment of any money shall arise unless funds are made available each fiscal year to the Using Agency by the Legislature with applicable matching funds being made available by the Federal government.

11.0 PAYMENTS

11.1 Payments shall be made to the Contractor on a reimbursable basis in response to invoices submitted.

11.2 Records of the Contractor's direct labor costs (and other billable charges pertinent to its compensation under this Contract) shall be maintained in accordance with generally accepted accounting principals. Copies applicable to open invoices will be made available to NJMC upon written request, prior to the final payment for the Contractor's services.

11.3 The Contractor shall submit a detailed invoice, project subtask invoice breakdown, project status report, and an NJMC invoice on a monthly basis. The NJMC invoice shall show the total invoiced amount and a reference to the Contractor's detailed invoice, while the Contractor's detailed invoice shall contain an itemized accounting of all charges. The invoice period shall be from the start of the period to the last Friday in the month.

11.4 The NJMC shall notify the Contractor of any questions with respect to the invoice, within 30 working days after receipt of the invoice. The NJMC and the Contractor shall designate representatives to resolve any disputes, as necessary. In the event that disputes remain unresolved for an extended period, the NJMC will pay the portion of the invoice not in dispute.

12.0 WAIVERS

12.1 Neither the inspection by the NJMC nor any of its agents, nor any orders, measurements of certificate by the NJMC, nor any order by the NJMC for the payment of money nor payment for, nor acceptance of, the whole nor any part of the work by the NJMC nor any extension of time nor any possession taken by the NJMC or its employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the NJMC, or any right to damages herein provided, nor shall any waiver of any breach of this Contract be held to be a waiver of any other or subsequent breach. Any remedy provided in this Contract shall be taken and construed as cumulative, that is, in addition to each and every other remedy herein provided, and in addition to all other suits, actions, or legal proceedings, the NJMC shall also be entitled as of right to writ of injunction against any breach of any of the provisions of this Contract.

13.0 INDEMNIFICATION

13.1 The Contractor shall defend, indemnify, protect and save harmless the NJMC, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature to the extent arising out of any act, error or omission in the performance of this Contract including, but limited to negligence, gross negligence, willful misconduct, intentional tort, fraud, bad faith, or criminal behavior of the Contractor, his agents, servants, employees, or subcontractors. The Contractor shall, at his own expense, appear, defend and pay all charges for attorneys and all costs and other expenses arising from such suit or claim incurred in connection therewith. If any judgment shall be rendered against the NJMC for which indemnification is provided under this paragraph, the Contractor shall, at his own expense, satisfy and discharge the same.

13.2 The NJMC shall, as soon as practicable after a claim has been made against it, give written notice thereof to the Contractor, along with full and complete particulars of the claim. If the suit is brought against the NJMC or any of its servants and employees, the NJMC shall expeditiously forward or have forwarded to the Contractor every demand, complaint, notice, summons, pleading or other process received by the NJMC or its representatives.

13.3 It is expressly agreed and understood that any approval by the NJMC of services performed and/or reports, plans, or specifications provided by the Contractor shall not operate to limit the obligations of the Contractor assumed in this Section or in the other provisions of this Contract.

14.0 INSURANCE

14.1 Insurance shall be provided in accordance with Bid Package Section 27.0.

15.0 NJMC STATUS DURING THE PROJECT

15.1 All work under this Contract shall be done under the observation of the Chief of Transportation. The Chief of Transportation shall decide any and all questions that may arise as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of Plans and Specifications, and all questions as to the acceptable fulfillment of the Contract on the part of the Contractor.

15.2 The Chief of Transportation shall be an employee of NJMC. In addition, the NJMC may designate additional individuals to act on the Chief of Transportation's behalf on a temporary basis, depending on the type of work occurring at the Project Site. At all times, these individuals shall have the same responsibilities and authority as the Chief of Transportation.

15.3 The Chief of Transportation shall be the initial interpreter of the Contract Document requirements and judge of the acceptability of the Work thereof. Any claims, disputes and/or other matters relating to the above or to changes in the Contract Price or Time will initially be referred to the NJMC, in writing. Any changes in the material terms of the Contract, including changes in Price or Time, shall be made only by mutually agreed upon written amendment to this Contract.

15.4 The NJMC shall make visits to the site to observe the progress and quality of the executed Work and to determine if it is proceeding in accordance with the Contract Documents. On the basis of such visits and observations, the Chief of Transportation will keep the NJMC informed of the quality and progress of the Work.

15.5 The NJMC may authorize minor variations in the Work, which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. If the Contractor believes that a variation issued as minor justifies an increase in the Contract Price and/or an extension of the Contract Time, the Contractor may make a claim therefore.

15.6 The NJMC may reject Work believed to be defective. The NJMC also has the authority to require special inspection and testing of the Work, whether or not it has been fabricated, installed or completed.

15.7 The NJMC shall not be responsible for the means, methods, techniques, sequences or procedures of the Contractor's performance of the Work, or the safety programs and precautions incident thereto. The NJMC will not be responsible for the failure of the Contractor to furnish or perform the Work in accordance with the Contract Documents.

15.8 The NJMC will not be responsible for acts of omission by the Contractor or any of his subcontractors or suppliers furnishing or performing any of the Work.

16.0 CONTRACTOR'S BANKRUPTCY

16.1 In the event of bankruptcy of the Contractor, the NJMC shall use the Performance and Payment Bond to complete the project. The Performance and Payment Bond shall specifically include coverage and protection against bankruptcy of the Contractor.

17.0 SUCCESSORS AND ASSIGNS

17.1 This Contract and all of the covenants hereof shall inure to the benefit of and be binding upon the NJMC and the Contractor respectively and his partners, successors, assigns and legal representatives. Neither the NJMC nor the Contractor shall have the right to assign, transfer or sublet his interests or obligations hereunder without notice to and written consent of the other party.

18.0 TERMINATION

18.1 The NJMC may, upon seven days written notice to the Contractor, and at any time after the execution of this contract, terminate or limit the services of the Contractor furnished hereunder for any reasons; including but not limited to, the abandonment of the Project, or the unavailability of monies to complete the Work.

19.0 GUARANTEE AND CORRECTION OF DEECTIVE WORK

19.1 The Contractor warrants and guarantees to the NJMC that all Work will be performed in accordance with all federal, state, and local laws standards and regulations and these Contract Documents; and that the Work will not be defective.

19.2 If within two (2) years after acceptance date, any Work is found to be defective, the Contractor shall promptly correct the defective work, or remove and replace it with non-defective Work; as directed by the NJMC, and at no additional cost to the NJMC.

20.0 CHANGE ORDERS

20.1 Any changes to any material terms of this contract, including change orders, shall be at the sole discretion of the NJMC, and shall be made by mutually agreed upon written amendment to this Contract.

21.0ADVERTISING

21.1 The Contractor shall not use the NJMC's name, logos, vehicles, or any data or results arising from this contract without first obtaining the prior written consent of the NJMC.

22.0 FEDERAL GOVERNMENT SPECIAL TERMS AND CONDITIONS

22.1 The Contractor must grant the State and Federal government unrestricted access to any systems documentation and records related to New Jersey's CASS project in accordance with federal requirements at 45 CFR 95.615. The Contractor must provide the State Contract Manager with written assurance that no Federal funds will be used to lobby or influence a Federal officer or Member of Congress and that the Contractor must file required Federal lobbying reports. The Contractor will be expected to comply with other Federal statutes including the Copeland "Anti-Kickback Act" (18USC874), Section 306 of the Clean Air Act, Section 508 of the Clean Water Act, and the Debarment Act.

IN WITNESS THEREOF, _____ and the NJMC have executed this Contract on the date immediately adjacent to their respective signatures.

FOR THE CONTRACTOR:

_____	_____
(Witness)	(Typed Name of Firm)
_____	_____
(Date)	(Signature of Bidder)
	_____
	(Typed Name of Bidder)
	_____
	(Typed Title of Bidder)

FOR THE NJMC:

_____	_____
(Witness)	Marcia A. Karrow, Executive Director
_____	
(Date)	

Meadowlands Adaptive Signal System for Traffic Reduction

MASSTR

NJMC Technical Specifications

TIGER 2

October 2014

Prepared By

New Jersey Meadowlands Commission

P.O. Box 640, One DeKorte Park Plaza, Lyndhurst New Jersey 07071

www.njmeadowlands.gov

David Liebgold
New Jersey Professional Engineer
License Number GE 45897

Hong Yuan
New Jersey Professional Engineer
License Number GE 48481

Leomar Almanzar
New Jersey Professional Engineer
License Number GE 48348

PAY ITEM SPECIFICATION SUMMARY				
ITEM	**SPEC**	**ITEM NAME**	**INCLUDED IN PAY ITEM**	**BID PACKAGE**
Detection System				
210	VD-2	Vehicle Detection Unit Installation	Installation Only	Low-Bid
221	VD-3	Vehicle Detection Cable, 3/C # 14	Materials and Installation	Low-Bid
224	CS-9	Vehicle Detection Cable, Coax	Materials and Installation	Low-Bid
234	VD-7	Travel Time System Installation	Installation Only	Low-Bid
241	VD-8	Removal of Existing Vehicle Detection Unit		Low-Bid
243	VD-10	Adjust Angle of Existing Vehicle Detection Unit	Adjustment and Setup	Low-Bid
244	VD-10	Relocate Existing Vehicle Detection Unit	Relocation, Adjustment & Setup	Low-Bid
Communication System				
302	CS-2	Antenna/Transceiver Assembly Installation	Installation Only	Low-Bid
311	CS-3	Ethernet Cable, Cat 5e	Materials and Installation	Low-Bid
332	CS-8	Antenna Assembly Installation	Installation Only	Low-Bid
333	CS-9	Antenna Cable	Materials and Installation	Low-Bid
334	CS-9	Antenna Jumper Cable	Materials and Installation	Low-Bid
352	CS-13	Solar Panel	Materials and Installation	Low-Bid
401	AP-1	T-Pole Extension	Design, Materials, and Installation	Low-Bid
402	AP-1	C-Pole Extension	Design, Materials, and Installation	Low-Bid
403	AP-1	K-Pole Extension	Design, Materials, and Installation	Low-Bid
404	AP-1	Steel Pole Extension	Design, Materials, and Installation	Low-Bid
411	AP-2	Antenna Pole, Type A (75')	Materials and Installation, including foundation	Low-Bid
412	AP-2	Antenna Pole, Type B (55')	Materials and Installation, including foundation	Low-Bid
413	AP-3	Antenna Pole, Type C (40')	Materials and Installation, including foundation	Low-Bid
Adaptive Traffic Control System				
504a	ATC-4	Traffic Signal Cabinet, Type P	Materials and Installation	Low-Bid
504b	ATC-4	Traffic Signal Cabinet, Type K	Materials and Installation	Low-Bid
504c	ATC-4	Traffic Signal Cabinet, Customized	Materials and Installation	Low-Bid

NJMC SPECIFICATION
MASSTR VD-2

ITEM 210: VEHICLE DETECTION UNIT INSTALLATION

1. GENERAL

This specification sets forth the minimum requirements for the installation of an image-based vehicle detection unit (VDU, i.e. camera).

At a minimum, the work shall include mounting the VDU on signal mast arms and/or poles, including any auxiliary hardware; pulling drop cables that are supplied by the VDU vendor from the VDU to the pole base; splicing the drop cable to the Vehicle Detection Cable 3/C#14 in the pole base; pulling cables in existing or empty conduits; connecting cables to the TIP (Terra Interface Panel) inside the controller cabinet in accordance with the manufacturer's installation manual; and removing abandoned existing loop detector cables as indicated in the Plans.

The installation shall comply with the installation instructions provided as an attachment to this specification. The installation shall comply with the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007. The Contractor shall furnish any and all auxiliary equipment which they deem necessary for safe and reliable installation of the system, including but not limited to: mounting brackets, screws, and washers. The Vehicle Detection Cable, 3/C#14, shall be spliced to the drop cable in the pole base as instructed by the VDU vendor, and shall be waterproof. No other splicing of cables shall be allowed. Removal of the abandoned existing loop detector cables shall be done in a manner as not to affect the general public safety and not to interrupt the operation of traffic controllers.

All major components shall be identified with a metal plate containing the serial number and bar code identification.

2. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
210	Vehicle Detection Unit Installation	Unit

The quantity of the VDU installation shall be measured as the actual number of VDU's, completely installed and accepted, and shall be paid for at the Contract unit price for each installation.

Price and payment will constitute full compensation for mounting VDU's on signal mast arms and/or poles, including any auxiliary hardware; pulling drop cables that are supplied by the VDU vendor from the VDU to the pole base; splicing the drop cable to the Vehicle Detection Cable 3/C#14 in the pole base; and pulling cables in existing or empty conduits; for removing abandoned existing loop detector cables as indicated in the Plans; for furnishing all mounting brackets, screws, and washers; and for all labor, equipment, tools and incidentals required to complete the installation.

Quantities of the VDU and the video detection cable are not measured and paid under this specification, but as separate items under NJMC Specifications: MASSTR VD-1 and VD-3, respectively.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

Autoscope® *ENCORE*™

Installation Guide

©2010 Image Sensing Systems Inc.
PN A900-1035-4 Rev B

Chapter 2: Power Cables

Introduction

This section is designed to help with selection, installation, and testing of power cables used to connect the *ENCORE* MVP to an Autoscope *Terra* Interface Panel (TIP).

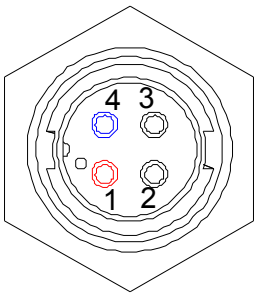
ENCORE MVPs are typically mounted on traffic luminaire arms or traffic signal mast arms where a clear traffic view is available. 3-wire, 16 to 18 AWG (solid, stranded, twisted, or untwisted) power cables are used for distances up to 330 meters (1000 feet).The part number for the 500 foot spool is 1175-010; for the 1000 foot spool is 1175-011. Pre-terminated cables (pigtails) of various lengths are available, as well as bulk cable that can be used for the run from the pole base or junction box back to the traffic cabinet. The Econolite catalog number for the "pigtail" cable is AENCORECBLxx, where xx is the cable length. For available cable lengths, contact your Autoscope representative.

The power cables may provide a connection between an *ENCORE* MVP and an intermediate, above ground junction point such as a pole-mounted junction box, or the base of a signal pole. Alternatively, cable can be run directly from the *Terra* Interface Panel to the rear of the *ENCORE* MVP. Two *ENCORE* MVP power cables may be connected to each power terminal on the TIP.

Power cables are installed to connect each *ENCORE* MVP to a *Terra* Interface Panel (TIP) that is located in a traffic controller cabinet or weatherproof junction box. The power cables also carry broadband communications between the *ENCORE* and the TIP.

Typical connections:

- Use a 3-conductor, #18 stranded cable with Polyethylene jacket for individual cable runs from the TIP to each Autoscope *ENCORE* camera in the field (see cable list above). The molded connector used is a Conxall connector (PN6832-4SG-XX, where XX is the grommet size. **Note**, field construction of cables is NOT recommended.



Pin Number	Function/Color
1	Neutral, White
2	Line/Hot, Black
3	No Connection
4	Ground, Green or Green/Yellow Stripe

- Use three existing wires ,or the bulk cable mentioned above, between the TIP and the pole base. Splice in the base of the pole to a 3-conductor, UV rated, flexible ”pigtail” cable with moulded connector, for the run to/from the junction/splice point to the *ENCORE* MVP.
- At the cabinet, you use the terminal strips provided on the TIP.

Installing Power Cables

Use the following guidelines to install the power cable between the *ENCORE* MVP junction location and the traffic control cabinet. You may install the cable to the *ENCORE* MVP by pulling it up the pole or dropping it down the pole, whichever is more convenient.

1. If you use a junction box, use cord grips at the point of cable entry into the junction box.
2. As directed on the site plan, pull the cable through underground conduit. Pulling the “pigtail” from the top down will minimize the risk of damage to the connector. You may also run the cable overhead.
3. To avoid the risk of moisture seeping into connections, install all power cables in a continuous run (with no splices), where possible. Otherwise, use locally-acceptable splicing methods to create a moisture-proof splice.
4. Label each cable entering the control cabinet so that it corresponds to the *ENCORE* MVP to which it is connected. It is recommended that a uniform *ENCORE* MVP numbering convention be adopted that is consistent throughout the installation. This facilitates installation, maintenance, and troubleshooting.

The following table suggests a numbering scheme for an 8-phase intersection. You may choose your own scheme. It is recommended that one scheme be adopted and used consistently.

Table 2-1: Sample Numbering Scheme for Intersection Applications

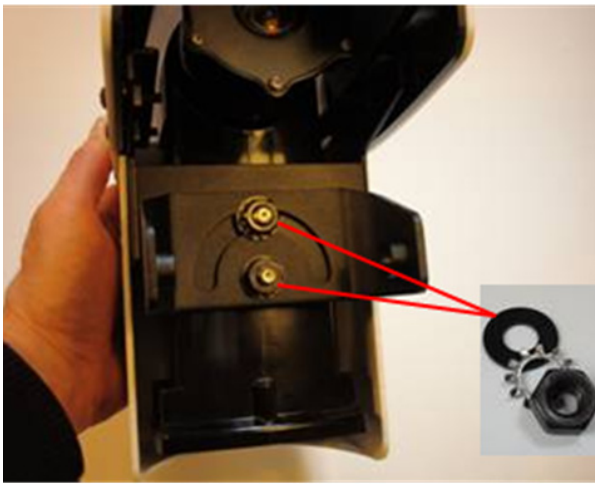
Approach	*ENCORE* **MVP**	**Intersection Controller Phase**
SB Snelling Ave	1	2, 5
EB University Ave	2	4, 7
NB Snelling Ave	3	6, 1
WB University Ave	4	8, 3

 ©2010 Image Sensing Systems Inc.

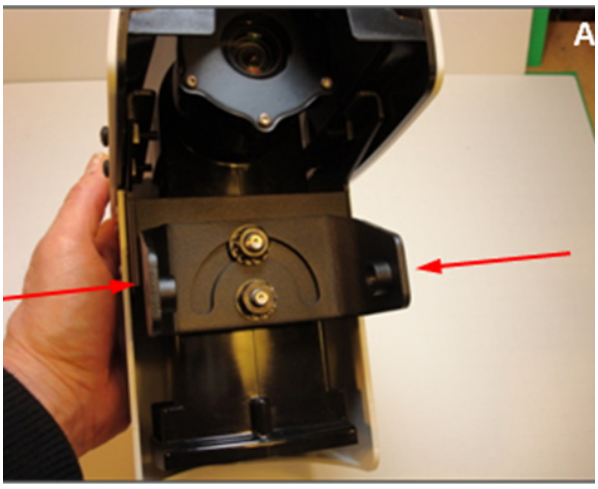
Installation Procedure

To install the *ENCORE* MVP:

1. If not already installed, install the extension brackets from the Extension Brackets Accessory Kit.
   a) First install the tilt bracket (PN A650-1035-02). Align tilt bracket on the sheet metal structure studs as shown. Apply flat washer (PN 200854), external tooth lock washer (PN 200792), and hex nut (PN 200855) to both threaded studs and hand tighten. These must be fully tightened when other brackets are applied:

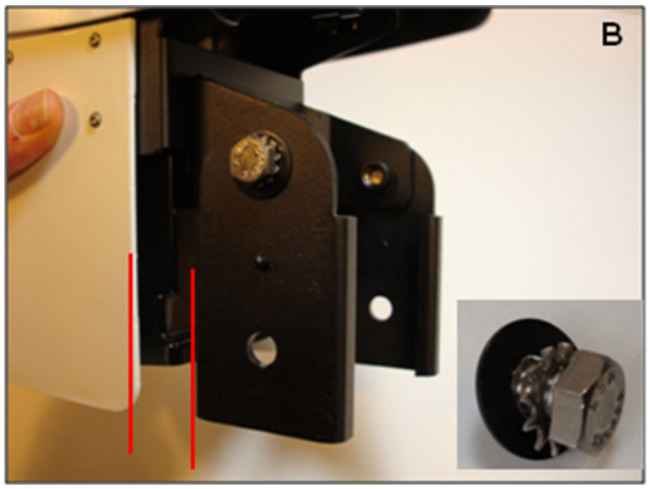


   b) Position extension brackets (PN A650-1035-05) on the outsides of the tilt bracket (PN A650-1035-02), as indicated by the arrows:



   c) Roughly orient the extension brackets so they are parallel to the lower shroud as indicated by the lines on the figure, and tighten with a 9/16-inch socket wrench:

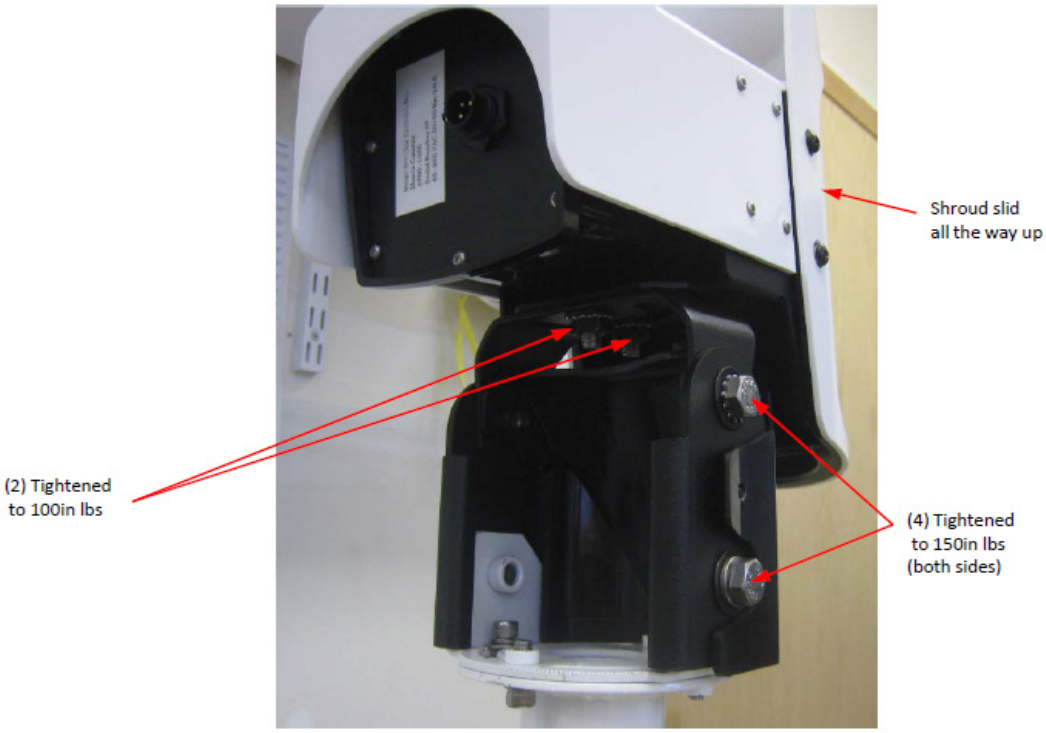
 ©2010 Image Sensing Systems Inc.



d) Aligning the ends of the extension brackets with a flat surface is an effective way to ensure they both line up properly.

e) Align and tighten the tilt bracket nuts with the 9/16-inch socket wrench.

2. Use the following torque settings for the *ENCORE* fasteners for this, and all subsequent adjusting and installation procedures that require loosening and tightening bolts:



3. Bolt the *ENCORE* MVP to its mounting pedestal as shown in Figure 4-2. Drop the *ENCORE* MVP assembly over the upright mounting brackets on top of the pole. The assembly is designed to hold itself in place while you install the bolts. The mounting bracket comes with two 5/8-inch Hex head bolts and mounting hardware. These mounting bolts attach the *ENCORE* MVP to the mounting bracket. Four, ¼-20 x 3/16 Allen head bolts allow you to adjust the MVP left and right using a 3/16-inch Allen wrench.

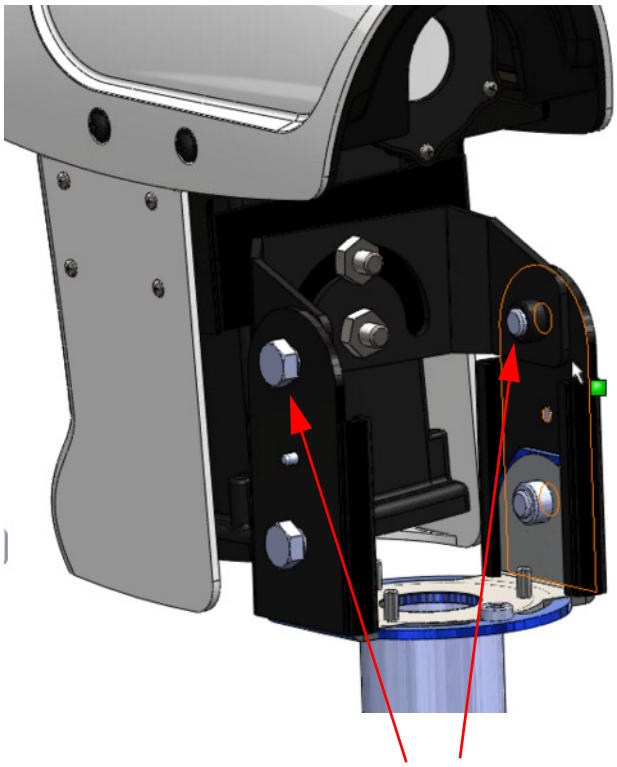
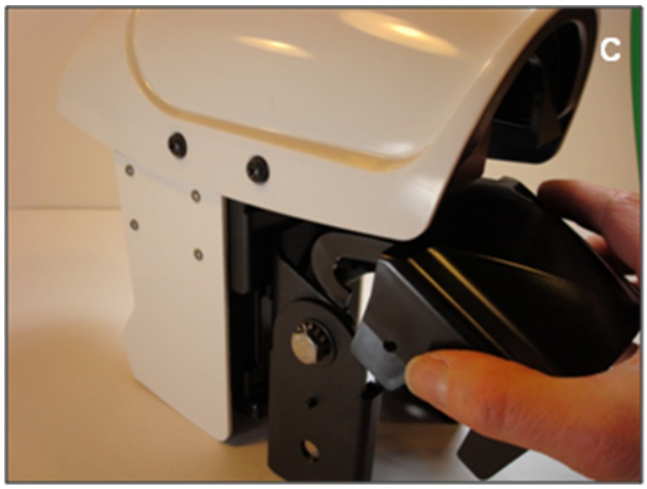


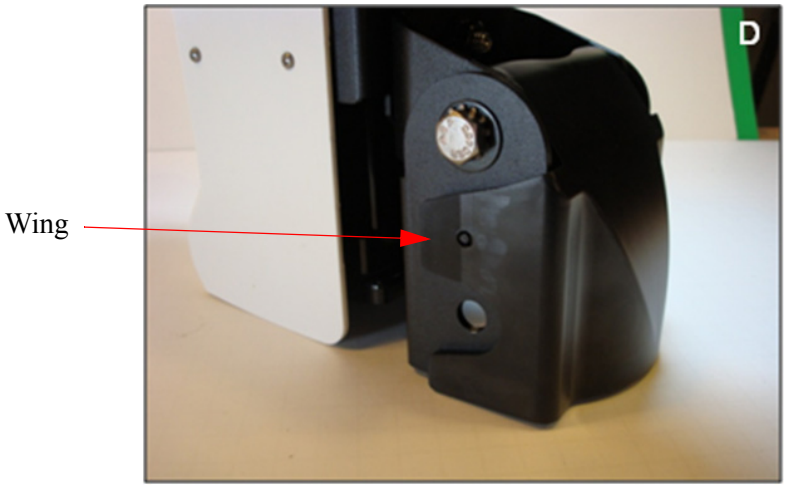
Figure 4-2: Attaching *ENCORE* MVP to Mounting Bracket

4. Hang the yoke cover (PN A650-1035-08) on the two threaded boss details on the interior of the tilt bracket. Guide into position as shown, deflecting brackets wings outward if needed.

 ©2010 Image Sensing Systems Inc.



5. Rotate yoke cover down about its hinge point until the pins align with the locking holes on the ‘wings’ of the yoke cover. You may deflect the yoke cover wings outward to help the bracket snap into place, Example image below shows yoke properly in place but not on the pole. (You may remove the yoke by deflecting the wings outward, rotating the yoke upwards, and pulling the assembly gently outwards until the yoke is clear of the boss details). The yoke is only installed after all camera setup installation steps are completed.



6. Using 3/4-inch stainless steel banding, attach mounting bracket to a signal pole or a mast arm at the height specified in the site plans. To ensure proper placement of the mounts, familiarize yourself with the detection objectives of each *ENCORE* MVP.

Caution

Whenever possible, avoid mounting the bracket directly under a luminaire as this may result in degraded detection performance at night during heavy precipitation such as snowfall. It is better to be above the cone of light from the luminaire to reduce or eliminate the scattering of light by the precipitation.

7. Attach the supplied mini-connector to the bottom connector of the *ENCORE* MVP by lining up the pins and grooves, and inserting and turning the collar to snap into place.

Figure 4-3: Autoscope *ENCORE* Bottom View

8. Create a drip loop in the cable near the *ENCORE* MVP, or with a round turn, and then feed the cable to the base of the signal pole using traditional methods. The cable may be installed inside the pole but splices should not be routed underground (place in a ground level pull-box).
9. If necessary splice the *ENCORE* MVP power cable to an underground rated power cable. If using underground rated power cable from the *ENCORE* MVP to the cabinet without a splice, connect the cable directly to the appropriate power terminal on the *Terra* Interface Panel.

The completed mounting for the *ENCORE* MVP is shown in Figure 4-4.

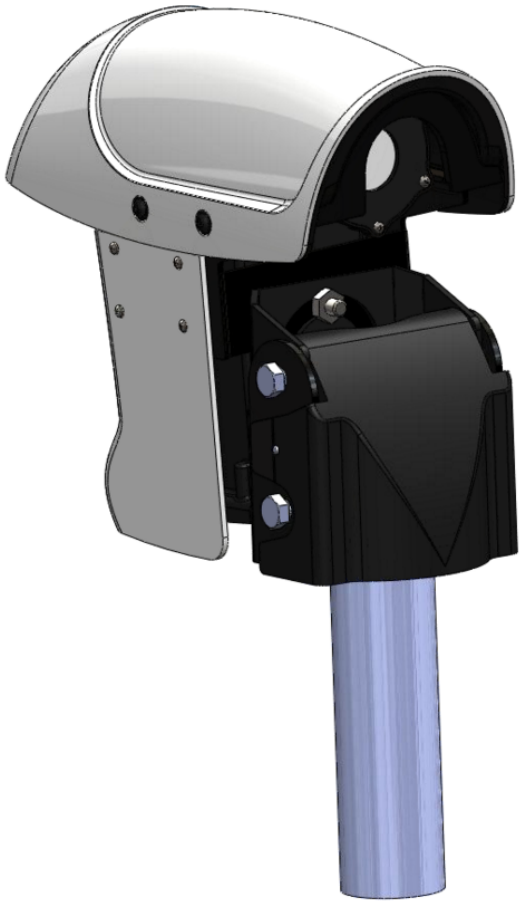


Figure 4-4: Completed *ENCORE* Mounting

Powering Up at the Controller Cabinet

To apply power to the system at the controller cabinet:

1. Before applying power, verify all cable connections are made properly between the *ENCORE* MVP, the power cables, and the TIP (*Terra* Interface Panel).
2. Turn on the breaker providing power to the TIP. Make sure all four ON/OFF switches to the power terminals for each MVP are ON, and allow about two minutes for the *ENCORE* MVPs to initialize.
3. Connect a laptop to the TIP either through an Ethernet bridge device or directly by using a CAT5, CAT 5e or CAT6 Ethernet patch cable. Note, if you encounter problems, try using a crossover cable instead.
4. Use the Network Browser video player or a software decoder (media player or web browser plug-in) on the laptop to stream video from the MVP and observe the video image. The image should have a reasonably bright, crisp, clear, and stable field of view for all vehicle types and colors.
5. Repeat Step 4 for additional MVPs.

Aiming the *ENCORE* MVP for an Intersection

This section explains how to aim the *ENCORE* MVP for maximum detection effectiveness at an intersection. For highway application instructions, see Aiming the *ENCORE*MVP for a Highway, next.

Aiming Overview

Adjust the *ENCORE* MVP field of view to meet the detection objectives. Do this with a single technician in a bucket truck or in coordination with an observer on the ground viewing the video at the TIP or TAP. Tools needed for this are:

- Mounting bracket supplies including stainless steel banding.
- Appropriate hand tools for adjusting the mounting bracket: 9/16-inch open-end wrench; 3/16-inch Allen wrench.
- #2 Phillips Driver
- Radios or cell phones to communicate between the cabinet and the bucket.
- Laptop and interface cables.
- Zoom Control Modem and interface cables, if required.
- Video Monitor. Optional, preferably one with under scanned display.
- Faceplate cleaning supplies (lint-free lens tissue/cloth; spray bottle with water).
- Measuring wheel and traffic cones.

There are five adjustments for optimizing the field of view:

- Pan (left or right).
- Tilt (up or down).
- Rotate the camera (clockwise or counterclockwise).
- Adjust the sunshield overhang.
- Zoom.

NOTE: Avoid including bright objects in the field of view. This includes traffic signals, streetlights, commercial signs, as well as headlights of vehicles outside the desired detection areas.

 ©2010 Image Sensing Systems Inc.

Aiming Procedure

To aim an *ENCORE* MVP:

1. Find out what the detection objectives are for this installation.
   Determine on the road where advance detectors (if any) will be placed. Use a measuring wheel and cones to measure and mark the desired detection zones.
2. Inventory the equipment against the installation plans for this site.
3. Fine-tune the aim by adjusting the zoom, pan left-right, tilt up-down, rotate the camera, and slide the sunshield all the way to the rear.

NOTE: For added safety, connect the cable to the Autoscope sensor before mounting this assembly onto the bracket. Do not depend solely on the connector to carry the camera during this procedure.

4. Loosen all mounting bracket adjustments. Finger-tighten all adjustments until ready for final tightening of fasteners (Step 10).
5. Aim the camera so the primary detection area, usually the stop line area, is centered left to right in the image. Zoom in or out leaving a half lane extra on either side of the detection area.

NOTE: An underscan monitor is a particularly good tool for adjusting tilt.

6. Tilt the *ENCORE* MVP down so the farthest away detectors, for example, advance detectors, will be near the top of the image or field of view. This will help reduce glare problems later.
7. Rotate the MVP so the traffic flows top to bottom, or to eliminate light problems and obstructions in the view. (Ideally for high-speed traffic, the nearest lane of detection would be vertical in the image. Hold a pen vertically on a monitor to compare the far detection lane orientation.)
8. Push the sunshield forward. Only move forward enough to see a little sunshield in the corners of the view. Sunshield overhang prevents direct sunlight from hitting the faceplate and helps keep blowing rain or snow from collecting on the faceplate. Setting the zoom to allow you to see a little of the sunshield in the corners does not substitute for proper sunshield overhang.
9. Tighten all fasteners. Start with the sunshield fasteners. Next, tighten the ‘left-right’ fasteners (if necessary, tilt the camera down temporarily to tighten them as well). If needed, rotate the camera by loosening the plate bolts, rotating the camera, and then retightening the plate bolts. Lastly, tighten the two ‘up-down’ bolts. We save the most difficult adjustment-firmly holding the tilt-angle, for the last.
10. Double check the aim of the camera after everything is tight.
11. Inspect the faceplate glass for fingerprints and dirt, etc. Clean appropriately using ONLY water and lint-free lens tissue/cloth.

Figure 4-5: Typical Intersection Optimized Field of View

Figure 4-6: Sky and Horizon Visible in Image—Tilt Down

Figure 4-7: Advance Detection Region Not in Field of View—Tilt Up

Verification

Check the image using the Network Browser video player or a software decoder (media player or web browser plug-in) on a laptop. The image should remain reasonably bright, crisp, clear, and stable when a bright vehicle passes through the field of view.

If no image is displayed, follow standard procedures for testing cables.

Aiming the *ENCORE* MVP for a Highway

Video detection objectives for highway applications typically include incident detection and routine traffic data collection for planning and reporting. Incident detection includes stopped vehicles, wrong-way vehicles, vehicles going too fast or too slow, or the effect of incidents beyond the field-of-view of the camera. Incident prevention objectives usually involve integration with an automatic response system that may or may not require operator intervention to reset. Surveillance video output from detection cameras is increasingly valuable to incident managers, who can apply video detection resources to more steps of their incident response process.

Aiming Cameras

For video detection, the aiming process can be 25-30% of all the factors that influence detection performance. The camera should not see much beyond the roadway itself. You want to fill the image with the detection target while excluding extraneous objects or light sources that could affect performance in some conditions.

For highways and freeways, aim the camera so that the detection area is toward the top and centered left-to-right in the image. The tilt angle will be less than 45 degree, so the detection area is 2 to 5 times the height of the sensor away from the camera. Ideally, you should see the front of vehicles at the bottom of the image. If zooming out for a wider view, you should move the sunshield forward so you only see a little sunshield in the upper corners of the picture. For roadside poles or high-speed traffic, you should rotate the camera so the farthest-away lane of detection is vertical, which helps detect high-speed vehicles. You may also make adjustments to block out unwanted light sources such as lit signs, window glare, etc., from the picture.

Video Detection and Video Surveillance

Video detection and video surveillance objectives usually conflict. Aiming cameras for a strictly video detection application is different from video surveillance objectives. You can think of the difference by comparing a portrait or family photograph (video detection) to an outdoor vacation photograph (surveillance). The most value to the operator is in the useful area of the picture, rather than a broader, panoramic picture. When surveillance video is also required, take time to define what will be the useful area in the scene. For example, you will still want to fill the image with the useful target area, and exclude extraneous objects or light sources. Finding the balance of these two, conflicting objectives minimizes the possible impact on detection performance, while providing a higher-quality video picture for surveillance.

Mounting Location

The site for your sensor or camera was likely selected during the planning and site survey processes. Mounting heights might be overhead sign structures or tall roadside poles. The optimal height is above 40 feet. If you need to choose a mounting location, please consult Autoscope Technical Support for site survey guidelines and worksheets for your project.

Tools and Supplies

The following tolls and supplies are required:

- Mounting bracket supplies including stainless steel banding.
- Appropriate hand tools for adjusting the mounting bracket: 9/16-inch open-end wrench; 3/16-inch Allen wrench.
- #2 Phillips driver.
- Radios or cell phones to communicate between the cabinet and the bucket.
- Laptop and interface cables.
- Zoom Control Modem and interface cables, if required.
- Video Monitor. Optional, preferably one with under scanned display.
- Faceplate cleaning supplies (lint-free lens tissue/cloth and water in a spray bottle).
- Measuring tape to measure the height of the camera.
- Measuring wheel and cones.

Aiming Your Autoscope Video Sensor

For specific product information, refer to the package inserts with the device packaging.

1. Inventory the equipment against the installation plans, especially what is necessary for each site location.
2. Plan the camera's field-of-view to meet the detection objectives at each site.
3. Prepare your team to adjust incrementally the left-right, up-down, *ENCORE* rotation, and sunshield overhang of the camera as you fine-tune its zoom and aim. Use consistent language for clear communications (for example, Tilt is up or down, Swing, left or right, Rotate the camera clockwise or counterclockwise, Push sunshield forward or back).
4. Use a measuring wheel to help define known calibration reference points. These usually define 40, 50, or 60 feet distances within the area of the detectors. Lane hash marks may also work.
5. Up in the bucket for added safety: first connect the cable to the camera inside the bucket before mounting the assembly onto the bracket. To ensure equipment safety, use additional support for the *ENCORE* camera assembly.
6. Loosen all mounting bracket adjustments and the sunshield fasteners. Finger-tighten the adjustments until you are ready for final tightening of all fasteners (in Step 14 below).
7. While aiming the camera to achieve the detection objectives, make bigger changes first to each adjustment and then fine tune each adjustment again before tightening.
8. Zoom in or out to fill the picture with the vehicles in the detection area.
9. Swing the camera left to right to center the vehicles in the image.

10. Tilt the camera down so you see the front of the vehicles at the top of the image and, toward the bottom of the image, you see only the hood of the vehicles and not the grill. This will help reduce glare problems later. Do not tilt the camera up too far. It is better to be too low.
11. When you tilt the camera down, you should see about: the entire length of a tractor trailer in the next-to-nearest lane; 3-lane line segments (hash marks) in the nearest lane, and 2 or 3 transverse shoulder markings (skip marks) in the shoulder of the far lane.
12. Rotate the camera so the traffic generally flows top to bottom, or as necessary to eliminate light problems and obstructions in the view. Ideally, the farthest lane of detection would be vertical in the image to better detect high-speed vehicles. You can hold a pen vertically on your monitor to compare to the far detection lane orientation.
13. If you see a lot of sunshield in the view after setting the zoom, push the sunshield forward to adjust the sunshield overhang. Do not push the sunshield forward too much. You should see a little sunshield in the corners of the view. This improves the quality of the video image, prevents direct sunlight from hitting the faceplate, and helps keep blowing rain or snow from collecting on the faceplate.
14. Tighten all fasteners. Start with the sunshield fasteners. Next, tighten the ‘left-right’ fasteners (if necessary, tilt the camera down temporarily to tighten them as well). If needed, rotate the camera by loosening the plate bolts, rotating the camera, and then retightening the plate bolts. Lastly, tighten the two ‘up-down’ bolts. We save the most difficult adjustment-firmly holding the tilt-angle, for the last.
15. Double check the aim of the camera after everything is tight. Make changes as necessary.
16. Inspect the faceplate glass for fingerprints and dirt, etc. Clean as necessary with lint-free lens tissue/cloth and water in a spray bottle.
17. Before you go back down the ground, measure the height of the camera lens relative to the road surface in the detection area, and record the height on the plans or worksheet for later reference.

NJMC SPECIFICATION
MASSTR VD-3

ITEM 221: VEHICLE DETECTION CABLE, 3/C#14

1. GENERAL

This specification sets forth the minimum requirements for a vehicle detection cable (Cable) that will be used for the Vehicle Detection System (VDS) as part of the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR).

The Cable utilizes the broadband-over-powerline (BPL) technology so that the impact on the conduit fill percentage of existing conduits is minimized. The Cable shall be designed for 110Volt AC use and shall be extremely durable and easy to install in underground conduit systems in order to accommodate the water-resistant requirements and low pulling tension necessary for conduit applications.

2. CABLE CONSTRUCTION

The cable shall consist of three conductors 14 AWG with an overall UV-resistant Low Density Polyethylene jacket.

- 14 AWG Components: three conductors, 14 AWG, 19 strands of 30 gauge tin-plated copper conductor diameter 0.046" to 0.052" ;
- Conductor Insulation: extruded polyethylene 200 with nominal 0.030" wall thickness ;
- Colors: black, green, and white;
- Jacket: extruded black polyethylene 0.040" to 0.050" wall thickness, UV-resistant;
- Finished diameter: 0.330" to 0.354";
- Electrical: 600 volts (rms);
- Operating temperature range: -20 °F to +140 °F

3. CABLE IDENTIFICATION

The cable identification shall be printed with the manufacturer's part number, number of conductors, conductor size, voltage rating, jacket material, and an indication that it is conduit rated.

During construction, each Cable shall be labeled in all junction boxes and cabinets with a distinctive number, in the format of "VDU-#", where the value of the # shall correspond to the VDU numbering scheme on the Plans.

4. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
221	Vehicle Detection Cable, 3/C#14	Linear Foot

The quantity of the Cable shall be measured as the actual linear feet installed and accepted, and shall be paid for at the Contract unit price per linear foot.

5. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR VD-7
ITEM 234: TRAVEL TIME SYSTEM INSTALLATION

1. GENERAL

This specification sets forth the minimum requirements for the installation of a travel time data system (System), including the travel time collectors (Collector) and travel time antennas (Antenna), the specification of which are listed in NJMC Specification VD-6.

The installation shall at a minimum include mounting the NEMA 4X enclosure that houses the Collector and Antenna onto roadside poles, pulling Ethernet cables in existing or empty conduits, connecting the Antenna, installing a Power over Ethernet (PoE) injector in the traffic control cabinets, and grounding the PoE injector, in accordance with the manufacturer's installation manual and the Plans.

The installation shall comply with the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007. The Contractor shall furnish any and all auxiliary equipment which they deem necessary for safe and reliable installation of the System, including but not limited to: mounting brackets, screws, and washers. Splices of cables shall not be allowed anywhere.

A certified representative from the manufacturer shall be on-site to supervise the installation. This person shall be on site until the initial installation is accepted by the NJMC.

All Antennas and Collectors shall be identified with a metal plate containing the serial number and bar code identification.

2. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
234	Travel Time System Installation	Unit

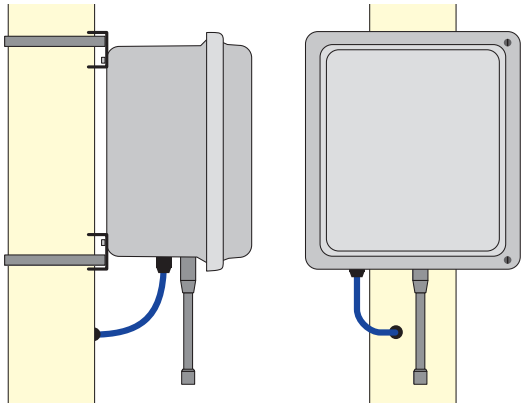
The quantity of the Installation shall be measured as the actual number deployment locations, completely installed and accepted, and shall be paid for at the Contract unit price for each deployment location.

Quantities of the Ethernet CAT5e cable connecting the Collector to controller cabinet, and the PoE injector to the Ethernet switch are not measured and paid under this specification, but as Item 311 under NJMC Specification: MASSTR CS-3.

Price and payment will constitute full compensation for mounting the NEMA 4X enclosure that houses the Collector and Antenna onto roadside poles, pulling Ethernet cables in existing or empty conduits, connecting the Antenna, installing a PoE injector in the traffic control cabinets, and grounding the PoE injector; for furnishing all mounting brackets, screws, and washers; and for all labor, equipment, tools and incidentals required to complete the installation.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.



BlueTOAD™ Roadside Bluetooth™ Sensor Equipment
Power over Ethernet (PoE) Configuration

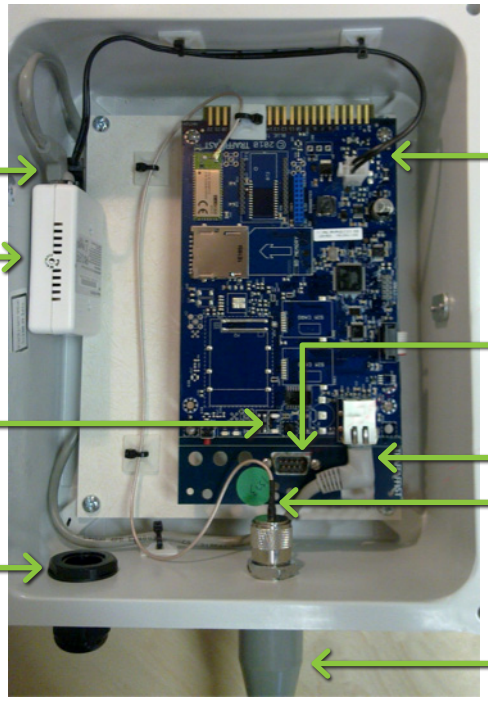
BlueTOAD Installation Guide

Customer Support
1-608-268-3941

© 2012 TrafficCast International, Inc. All rights reserved.

TrafficCast, BlueTOAD, and all other associated logos are trademarks of TrafficCast International, Inc. All other logos and brand names are trademarks or registered trademarks of their respective holders.

BlueTOAD Sensor Equipment Components



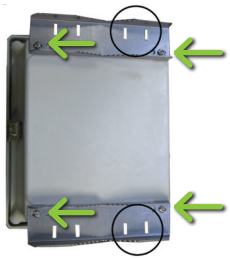
BlueTOAD Unit Mounting How-To Basics

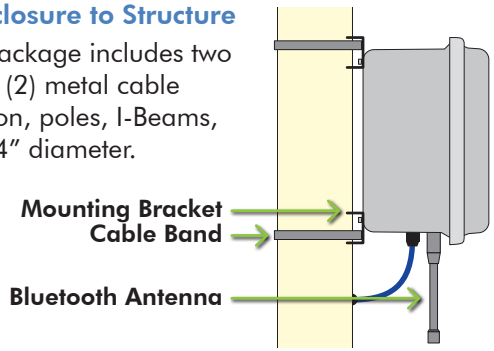
Category	Recommended Requirements
Mounting structure	Lamp or signal poles (BlueTOAD ~ 10 lbs.)
Height	Clear immediate obstacles - 10′ – 14′ ground clearance ideal
Antenna Clearance	The device should be mounted such that the external Bluetooth antenna is as unobstructed as possible and so that it has a clear line of sight to the target road segment
Antenna Alignment	Use the BlueTOAD front cover (enclosure door face) as an antenna reference.
	If the BlueTOAD unit is mounted on side of the road, place front cover parallel to the road.
	If the BlueTOAD unit is mounted on the center median, place the front cover perpendicular to the road.

BlueTOAD Installation Guide

1 Mount BlueTOAD NEMA Enclosure to Structure

The BlueTOAD standard unit package includes two (2) mounting brackets and two (2) metal cable bands designed for mounting on, poles, I-Beams, or support structures up to a 14" diameter.

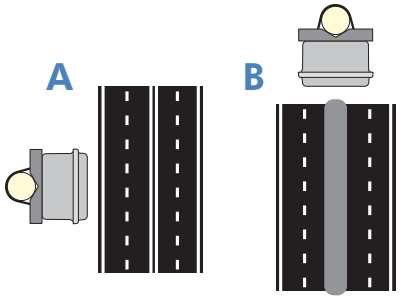




BlueTOAD Unit Roadside Alignment

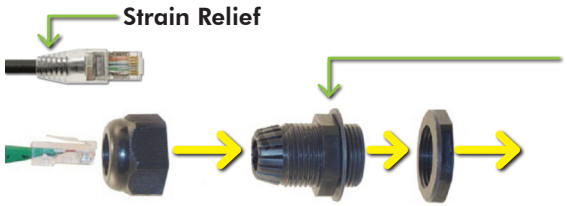
Alignment A: For roadside install, Front Cover mounted parallel to roadway.

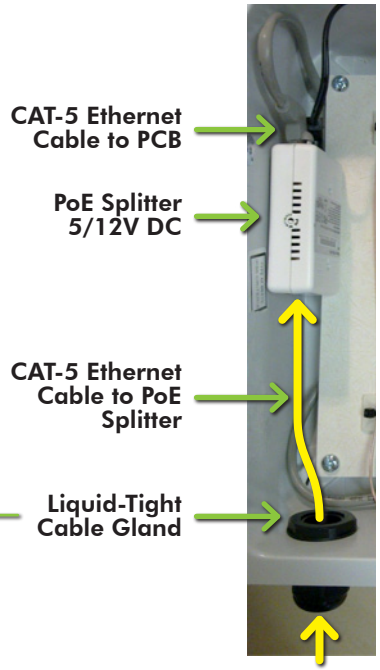
Alignment B: For center median install, Front Cover mounted perpendicular to roadway.



2 Install CAT-5 Ethernet Cable

1. Run CAT-5 cable from the roadside cabinet to where the BlueTOAD unit is mounted
2. Pass the CAT-5 Ethernet cable through the Liquid-Tight Cable Gland. The strain relief on the cable will have to be removed in order to fit through the Cable Gland. The Strain Relief can be slid away from the RJ-45 connector without cutting the relief.
3. Insert the RJ-45 connector into the PoE Splitter
4. Tighten the Cable Gland

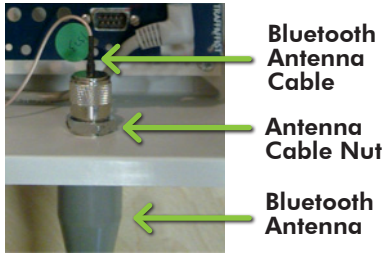




3 Connect Bluetooth Antenna

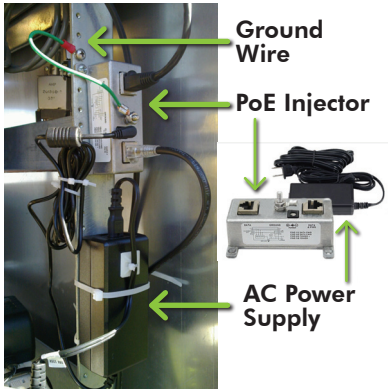
Attach Bluetooth Antenna. **Take extra precaution not to detach the cable from the connector on the BlueTOAD PCB.**

1. Secure antenna with Nut on inside of enclosure
2. Connect Bluetooth cable to antenna
3. Hand-tighten (with most connectors and antennae, hand-tension is preferred)



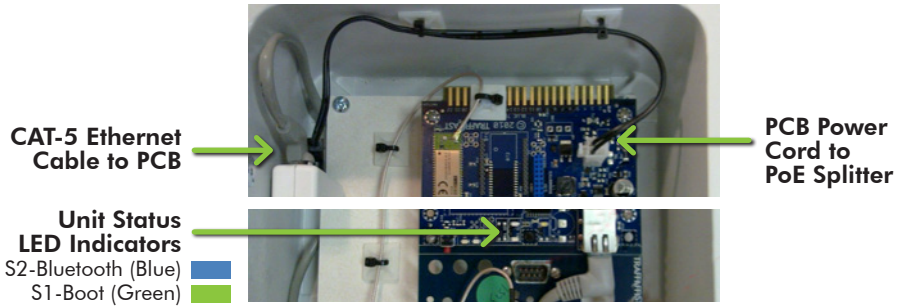
4 Install PoE Injector in Roadside Cabinet

1. Secure PoE injector onto flat surface inside roadside cabinet
2. Attach Ground Wire
3. The PoE injector has two (2) RJ-45 receptacles
   - Data – connects to network Ethernet switch, router, or hub
   - Data & Power – connects to the BlueTOAD unit (PCB)
4. Connect AC power supply to PoE Injector and "plug" the 110V cord to AC power outlet



5 Turn ON BlueTOAD Unit

To automatically turn ON the BlueTOAD unit, plug the power cord into the mated connector on the BlueTOAD PCB.



LED	Color	At Initial Start-up	At Normal State (May take up to 3 minutes)
S1- Boot	Green	Blink - 4 times per second	Blink - 1 time per 3 seconds
S2-Bluetooth	Blue	Off	Blink - 3 times per 3 seconds

NJMC SPECIFICATION
MASSTR VD-8

ITEM 241: REMOVAL OF EXISITNG VEHICLE DETECTION UNIT

1. GENERAL

This specification sets forth the minimum requirements for the removal of an existing above-the-ground vehicle detection unit (VDU). Depending on the type of existing vehicle detection system, the VDU can be a camera, a radar sensor, or a microwave sensor that are mounted on existing signal mast arms or poles. The work shall at a minimum include dismounting the existing vehicle detection unit from existing poles and mast arms, removing the mounting brackets, weatherproofing any openings left on the poles/mast arms after the existing VDU is removed, removing the cables from the existing VDU to the control cabinet, and disconnecting the power of the detector card/panel/modules for the existing VDU inside the control cabinet. The removed equipment and materials shall be returned to the NJMC. The removal shall follow the accepted standards of ANSI, NEMA, UL, NEC, ITE, and ASTM.

2. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
241	Removal of Existing Vehicle Detection Unit	Unit

The quantity of the VDU removal shall be measured as the actual number of VDU's (i.e. cameras, radar sensors, or microwave sensors) that are completely removed and accepted, and shall be paid for at the Contract unit price for each removed unit. For example, for a four-approach intersection, if each approach has one existing VDU and all four existing VDU's are removed, the quantity of Item 241 is four, instead of one.

Price and payment will constitute full compensation for removing the existing VDU's from existing poles or mast arms, including the mounting brackets, and the cables and cable connections from the VDU to the control cabinet; and for all labor, equipment, tools and incidentals required to complete the removal.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR VD-10

ITEM 243: ADJUST ANGLE OF EXISITNG VEHICLE DETECTION UNIT (VDU)
ITEM 244: RELOCATE EXISITNG VEHICLE DETECTION UNIT (VDU)

1. GENERAL

This specification sets forth the minimum requirements for the adjustment and relocation of an existing image-based vehicle detection unit (VDU, i.e. camera).

Item 243 shall at a minimum include adjusting the mounting angle of the existing VDU as directed by the NJMC. The Contractor shall furnish any and all auxiliary equipment which they deem necessary for the safe and reliable adjustment of the existing VDU, including but not limited to: mounting brackets, screws, washers, cables, and cable connections. Splices of cables shall not be allowed anywhere.

Item 244 shall at a minimum include adjusting the mounting location and mounting angle of the existing VDU as directed by the NJMC. The Contractor shall furnish any and all auxiliary equipment which they deem necessary for safe and reliable relocation of the VDU, including but not limited to: mounting brackets, screws, washers, cables, and cable connections. Splices of cables shall not be allowed anywhere.

2. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
243	Adjust Angle of Existing Vehicle Detection Unit (VDU)	Unit
244	Relocate Existing Vehicle Detection Unit (VDU)	Unit

The quantity of the Item 243 shall be measured as the actual number of VDU that are adjusted accepted, and shall be paid for at the Contract unit price for each adjusted camera. Price and payment will constitute full compensation for adjusting the mounting angle of the existing VDU; for furnishing all mounting brackets, screws, washers, cables and cable connections; and for all labor, equipment, tools and incidentals required to complete the work.

The quantity of the Item 244 shall be measured as the actual number of VDU that are completely relocated, and shall be paid for at the Contract unit price for each relocated camera. Price and payment will constitute full compensation for adjusting the mounting location and mounting angle of the existing VDU; for furnishing all mounting brackets, screws, washers, cables and cable connections; and for all labor, equipment, tools and incidentals required to complete the work.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR CS-2

ITEM 302: ANTENNA/TRANSCEIVER ASSEMBLY INSTALLATION

1. GENERAL

This specification sets forth the minimum requirements for installing the pre-assembled wireless transceiver and antenna assembly (Assembly) that is part of the Communication System (CS) of the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR).

The transceivers and antennas are pre-assembled by the CS vendor into one unit and delivered to the Contractor for installation.

The installation shall at a minimum include mounting the Assembly as directed by the Plans and the NJMC, pulling cables in existing or empty conduits, connecting the Ethernet cables to the transceiver, and properly aiming the antenna at the associated receiving transceiver. Each Ethernet cable shall have a distinctive number labeled at each junction box and both ends for identification. Splices of cables shall not be allowed anywhere.

2. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
302	Antenna/Transceiver Assembly Installation	Unit

The quantity of the Assembly Installation shall be measured as the number of Assembly installations, completely configured and accepted, and shall be paid for at the Contract unit price for each installation and connection. Price and payment will constitute full compensation for furnishing all auxiliary equipment, including mounting brackets, screws, and washers; and for all labor, equipment, tools, and incidentals required for the safe and secure placement of the Assembly.

Quantities of the Ethernet cable are not measured and paid under this specification, but as separate items under NJMC Specifications CS-3.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

Complete Transceiver/Antenna Assembly with all required brackets to be supplied by NJMC MASSTR Communication System Manager

NJMC SPECIFICATION
MASSTR CS-3

ITEM 311: ETHERNET CABLE, CAT5E

1. GENERAL

This specification sets forth the minimum requirements for a Cat5e Ethernet cable (Cable) that will be used for the communication system to be built by the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR). The installation shall include terminating and grounding the Ethernet cable.

2. CABLE CONSTRUCTION

The Cable shall be of a Cat5e type, IEEE 802.3 compliant and support 10/100/1000 Base-T network standards.

The Cable shall consist of eight (8) 24 AWG solid bear copper conductors, each insulated with a color coded premium grade flame retardant polyethylene (PE) or Polyolefin (PO) jacket. The insulated conductors shall be twisted into four pairs. The Cable shall have an inner layer of polyester (PET) shield, an outer layer of aluminum foil shield with 100% coverage, an inner jacket and an outer jacket both made from industrial grade black PE or LLPE. The Cable shall have a 24 AWG tinned copper drain wire and shall be filled with flooding compound. Each complete run of cable shall include compatible P8C8 (RJ45) Ethernet connectors at both ends. The copper drain wire insert shall be adequately grounded to the P8C8, or the Ethernet cable shall be grounded by an alternate NJMC approved method. Each segment of cable shall be tested for connectivity using a fluke test, or NJMC approved alternative method, after installation.

The Cable shall be outdoor rated and suitable to the harsh, non-enclosed environment, and shall be Gasoline and Oil Resistant II and UV Resistant. The Cable shall be extremely durable and easy to install in underground conduit systems in order to accommodate the water-resistant requirements and low pulling tension necessary for conduit applications. The cable shall have a nominal jacket outside diameter less than 0.30 inches.

3. STANDARDS

- TIA/EIA 568-B.2
- ISO/IEC 11801
- RoHS

4. CABLE IDENTIFICATION

The Cable identification shall be printed with the manufacturer's part number, number of conductors, conductor size, voltage rating, jacket material, and an indication that it is outdoor rated and conduit rated.

During construction, each Ethernet Cable shall be labeled in all junction boxes and cabinets in the format of "E-#", where the value of the # shall be distinctive.

5. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
311	Ethernet Cable, Cat5e	Linear Foot

The quantity of the Cable shall be measured as the actual linear feet installed and accepted, and shall be paid for at the Contract unit price per linear foot.

6. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR CS-8

ITEM 332: ANTENNA ASSEMBLY INSTALLATION

1. GENERAL

This specification sets forth the minimum work for the installation of a wireless antenna panel (Installation).

This specification shall only apply when the antenna panel is installed separately from the pre-assembled antenna/transceiver assembly as specified in NJMC Specification CS-2.

The work at a minimum shall include mounting the antenna panel as directed by the Plans and NJMC, and connecting the antennas with the transceiver. The Contractor shall furnish all auxiliary equipment and processes necessary for safe and reliable installation of the Antenna, including but not limited to: mounting brackets, screws, washers, etc. Splices of cables shall not be allowed anywhere except for the connection between the antenna cable and the antenna jumper cable.

2. MEASUREMENT AND PAYMENT

The following NJMC pay item shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
332	Antenna Assembly Installation	Unit

The quantity of the Installation shall be measured as the number of Antenna panels, completely configured and accepted, and shall be paid for at the Contract unit price for each installation. Price and payment will constitute full compensation for furnishing all auxiliary equipment, including mounting brackets, screws, and washers; and for all labor, equipment, tools, and incidentals required for the safe and secure placement and configuration of the Antenna.

Quantities of the antenna cable and antenna jumper cable are not measured and paid under this specification, but as separate items under NJMC Specification CS-9.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR CS-9

ITEM 224: VEHICLE DETECTION CABLE, COAX
ITEM 333: ANTENNA CABLE
ITEM 334: ANTENNA JUMPER CABLE

1. GENERAL

This specification sets forth the minimum requirements for an antenna cable, an antenna jumper cable, and a vehicle detection coax cable that will be used for the communication system to be built by the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR).

2. CABLE CONSTRUCTION

All three cables shall be a coaxial type and shall from inside out consist of one copper clad aluminum inner conductor, one physical foam polyethylene (PE) dielectric layer, one bonded aluminum foil and tinned copper braid outer conductor, and one black premium grade flame retardant PE outer jacket. The dimensions of each layer shall comply with the following:

	Material	Diameter	
		Item 333	Item 224 & 334
Inner Connector	Copper clad aluminum	0.176″±0.001″	0.108″±0.001″
Dielectric Layer	Physical foam polyethylene	0.455″±0.012″	0.285″±0.005″
Outer Connector	Bonded Aluminum Foil & Tinned Copper Braid	Nominal 0.492″	Nominal 0.320″
Outer Jacket	Black Polyethylene	0.590″±0.008″	0.40″±0.008″

All three cables shall be extremely durable and easy to install with maximum flexibility where curves, bends and twists rule out the use of standard hard-line transmission cables. Item 333 shall have a minimum bend radius of 3.0″ and Items 224 & 334 shall have a minimum bend radius of 2.1″.

All three cables shall be outdoor rated and suitable to the harsh, non-enclosed environment, and shall be Gasoline and Oil Resistant II and UV Resistant. The operating temperature range shall be from -40 °F to +140 °F at 10% to 90% relative humidity, non-condensing. All three cables shall carry a minimum of 5 years warranty and a minimum of 20 years life expectancy for outdoor use.

3. ELECTRICAL CHARISCTERISTICS

The cables shall meet the following electrical characteristics:

	Item 333	Item 224 & 334
Capacitance	23.4 pF/ft	23.9 pF/ft
Impedance	50 Ω	50 Ω
Inductance	0.058 uH/ft	0.060 uH/ft
Velocity	87%	85%
Inner Conductor DC Resistance	< 0.53 (Ω/1000ft)	< 1.39 (Ω/1000ft)

Outer Conductor DC Resistance	< 1.2 (Ω/1000ft)	< 1.65 (Ω/1000ft)
Shielding Effectiveness	> 90dB	> 90dB
Jacket Spark	5000 VAC	5000 VAC
Cut Off Frequency	10.3 GHz	16.2 GHz
Peak Power	40 kW	16 kW

4. CABLE CONNECTOR

Each installed strand of the three types of cables shall include two Type N-style female (plug) connectors that meet all standards detailed in this specification. The Type N-style connectors shall be either straight or right-angle depending on the specific installation requirements.

5. CABLE IDENTIFICATION

The cable identification shall be printed with the manufacturer's part number, voltage rating, jacket material, and an indication that it is outdoor rated and conduit rated.

During construction, each Vehicle Detection Cable shall be labeled on both ends with a distinctive number, in the format of "VDU-#", where the value of the # shall correspond to the VDU numbering scheme on the Plans.

6. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
224	Vehicle Detection Cable, Coax	Linear Foot
333	Antenna Cable	Linear Foot
334	Antenna Jumper Cable	Linear Foot

The quantity of the cables shall be measured as the actual linear feet installed and accepted by the Contractor, and shall be paid for at the Contract unit price per linear foot. Price and payment shall also include the N-style connectors required to connect the wireless transceivers and antennas as specified in NJMC Specification WC-1 and WC-7.

7. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR CS-13

ITEM 352: Solar Panel

1. GENERAL

This specification sets forth the minimum requirements for a solar panel that will be used for the Communication System (CS) as part of the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR).

The solar panels shall be capable of recharging the batteries at a rate of 4 hours of sun for 24 hours of transceiver usage. Ensure that the battery capacity is capable of operating the transceiver for a period of 18 days without sunlight.

The solar panel shall include a solar charged battery backup system that is capable of providing continuous operation when the primary power source fails.

Price and payment will constitute full compensation for furnishing all components, including solar panels, power cables, batteries, all mounting equipment, any auxiliary hardware necessary for installation, setup and configuration.

A specification sheet for all necessary components shall be submitted to the NJMC for review and approval.

Any and all components manufactured with any amount of iron or steel shall include a certification that the component was manufactured in the US (in accordance with the Buy America Act).

2. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
352	Solar Panel	Unit

The quantity of the Solar Panel shall be measured as the actual unit completely installed, configured and accepted, and shall be paid for at the Contract unit price per unit.

3. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR AP-1

ITEM 401: T-POLE EXTENSION
ITEM 402: C-POLE EXTENSION
ITEM 403: K-POLE EXTENSION
ITEM 404: STEEL POLE EXTENSION

1. GENERAL

This specification sets forth the minimum requirements for the traffic signal pole extensions (Extensions) that are used to mount antennas and transceivers, as part of the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR). Four types of Extensions are specified within this document:

- T-Pole Extension- 8.7 Feet
- C-Pole Extension- 3.0 Feet
- K-Pole Extension- 17.5 Feet
- Steele Pole Extension- 19.0 Feet

2. DESIGN SPECIFICATIONS

The Extensions shall be designed conforming to the 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 5th edition, incorporated herein by reference, as amended and supplemented.

All loads applied to all members shall be taken into account for strength design, and all welded structural details shall been analyzed against fatigue. The design should consider, but is not limited to the traffic pole and mast arm.

Maximum horizontal deflection at the top of the pole completely assembled with wireless antennas, transceiver assembly and all fixtures attached shall be determined in accordance with the abovementioned AASHTO specifications.

Submit detail plans and design calculations of Extensions, manufacturer specified antenna/transceiver weight and projection area. Ensure the design calculations and working drawings are signed and sealed by a professional engineer licensed in the State of New Jersey.

For more information regarding dimensions of the Extensions refer to Construction Details-1, Sheet # 24.

3. MATERIALS

The Extensions material shall be similar to the material of the traffic signal pole where the Extensions are being attached, unless otherwise stated. For more information about the traffic signal poles refer to NJDOT electrical specifications and details.

4. INSTALLATION

Installation of the Extensions shall comply with the NJDOT Extensions Specifications for Road and Bridge Construction, 2007.

All welding shall conform to the ANSI/AWS D1.1 Structural Welding Code-Steel, with NJDOT amendments in NJDOT Extensions Specifications. Welding inspection and full penetration weld nondestructive testing shall conform to AWS D1.1. All welding shall be done with E-80T-1 wire.

Refer to manufacturer's specifications for the weight and projection area of wireless antennas and wireless transceivers.

The tightening procedure for anchor bolts shall follow Section 6.9 of the 2005 FHWA "Guidelines for the Installation, Inspection, Maintenance and Repair of Structural Supports for Highway Signs, Luminaries and Traffic Signals." According to the structure design of the T-pole extension and K-pole extension, the bolts connecting the pole shoe base and the transformer base shall be changed to standardized 1" ASTM A325 steel bolt.

The Manufacturer or Contractor shall furnish any and all auxiliary parts and equipment which they deem necessary for safe and reliable installation of the Extensions, including but not limited to ASTM A325 steel bolts, friction ring, stainless steel thrubolts, hex nuts, washers and fasteners.

5. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
401	T-Pole Extension	Unit
402	C-Pole Extension	Unit
403	K-Pole Extension	Unit
404	Steel Pole Extension	Unit

The quantity of Extensions will be measured as the actual number of Extensions that are completely installed and accepted by the NJMC, including all necessary auxiliary equipments, including but not limited to ASTM A325 steel bolts, friction ring, stainless steel thrubolts, hex nuts, washers and fasteners.

The quantity of the Extensions will be paid for at the Extensions unit price for each Extension that are completely installed and accepted by the NJMC. Price and payment shall constitute full compensation for furnishing and placing all hardware components, including all necessary auxiliary equipments, including but not limited to ASTM A325 steel bolts, friction ring, stainless steel thrubolts, hex nuts, washers and fasteners; and for all labor, equipment, tools and incidentals required to complete the installation.

6. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR AP-2

ITEM 411: ANTENNA POLE, TYPE A (75′)
ITEM 412: ANTENNA POLE, TYPE B (55′)

1. GENERAL

This specification sets forth the minimum requirements for the Antenna Pole, Type A and B, (Pole) that are used to mount antennas, transceivers, and cameras as part of the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR). Two types of Pole(s) are specified within this document:

- Antenna Pole, Type A, (75′)
- Antenna Pole, Type B, (55′)

2. DESIGN SPECIFICATIONS

The Pole(s) shall be designed conforming to the 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 5th edition, incorporated herein by reference, as amended and supplemented.

The design shall uitlize the following parameters:

- Design wind velocity - 80 m.p.h. (Appendix C)
- Design ice load - 3 p.s.f.
- Fatigue category – 2
- Design Life – 50 years

All loads applied to all members shall be taken into account for strength design, and all welded structural details shall been analyzed against fatigue. The design should consider, but is not limited to pole, hand hole, base plate, pole-to-base connection, anchor bolts and embedment.

Maximum horizontal deflection at the top of the pole completely assembled with wireless antennas, transceivers and all fixtures attached shall not exceed 2 inches from the center line due to a 40 mph (gust factor 1.3) wind speed (Appendix C wind pressure formula).

Submit detail plans and design calculations of Pole(s), manufacturer specified antenna/transceiver weight and projection area, and anchor bolt assembly for approval. Ensure the design calculations and working drawings are signed and sealed by a professional engineer licensed in the State of New Jersey.

3. MATERIALS

The steel pole shall be tapered and consist of a maximum of two individual steel sections. The lower section shall be a minimum of 40 feet and maximum of 50 feet long with a minimum thickness of ¼ inches and contain only one longitudinal seam weld. However if the pole diameter is greater than 24 inches, two longitudinal seam welds will be permitted. Either slip joints or full penetration weld joints are acceptable. Laminated tubes are not permitted.

The pole and tenon material shall conform to ASTM Specification A595, Grade A (minimum yield point 55 ksi) or Grade B (minimum yield point 60 ksi). If the pole consists of two segments, they shall be of the same material. As an alternative, the pole (18 sided minimum) and tenon may be formed from steel conforming to ASTM A572 Grade 55 or Grade 60. All other steel shall conform to ASTM Specification A709 (AASHTO M270) Grade 36 or Grade 50. All Pole(s) regardless of thickness and all steel plates greater than ½ inches thickness shall meet the AASHTO requirements for notch toughness (charpy testing) Zone 2. Tenon and both segments of the pole shall be galvanized per ASTM A123 after fabrication.

Anchor bolt materials shall conform to ASTM F1554, Grade 55. The anchor bolts shall be galvanized per ASTM

A153, Class C after threading for the full length of the bolt, as well as nuts and washers. High strength bolts, nuts, and washers shall be galvanized per ASTM A153, Class C.

Stainless steel fasteners (including bolts, nuts and washers) shall conform to ASTM A320, Grade B8, Class 2 (ANSI Type 304) and strain hardened. Ensure all nuts lock type with sealing all threads.

The foundation shall conform to the New Jersey Department of Transportation (NJDOT) ITS Details ITSD-704-15. All concrete shall be "Class B" as defined in the NJDOT Standard Specifications for Road and Bridge Construction, 2007, unless otherwise specified by the Engineer.

4. INSTALLATION

Installation of the Pole(s) shall comply with the NJDOT Standard Specifications for Road and Bridge Construction, 2007.

The Pole(s) shall be installed in the area beyond recovery distance or behind the guide rail.

Provide neoprene door gasket.

Provide a galvanized screen, double rap around the base of pole. The galvanized screen shall have an opening of no more than ½ inches wide and be held together with stainless steel nuts, bolts and flat washers.

Grouting under the pole shall not be permitted.

Provide one (1) leveling hex nuts, two (2) hold-down hex nuts and one (2) flat washer per anchor bolt. Determine the proper length of the anchor bolt for projection and embedment. The clearance between the top of the foundation and the bottom of the leveling nut shall not exceed 1½ inches. The projection length shall be a minimum of 9 inches.

All welding shall conform to the ANSI/AWS D1.1 Structural Welding Code-Steel, with NJDOT amendments in NJDOT Standard Specifications. Welding inspection and full penetration weld nondestructive testing shall conform to AWS D1.1. All welding shall be done with E-80T-1 wire.

Locate the top, center and bottom electrical cable guides within the pole and align with each other. Position the bottom cable guide 2 inches below the handhole and top cable guide 1 inch directly below the top of tenon. Position two parking stands a maximum of 2¾" inches below the top of the handhole and located at the 90 degree and 270 degree from the handhole. Ensure each cable guide is 3/8 inches wire eye bolt having 1" internal diameter for wire tie off.

Refer to manufacturer's specifications for the weight and projection area of wireless antennas and wireless transceivers.

The tightening procedure for anchor bolts shall follow Section 6.9 of the 2005 FHWA "Guidelines for the Installation, Inspection, maintenance and Repair of Structural Supports for Highway Signs, Luminaries and Traffic Signals."

The Manufacturer or Contractor shall furnish any and all auxiliary equipment which they deem necessary for safe and reliable installation of the Pole(s), including but not limited to foundation, stainless steel bolts, anchor bolts, nuts, washers and fasteners.

5. MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
411	Antenna Pole, Type A, (75′)	Unit
412	Antenna Pole, Type B, (55′)	Unit

The quantity of Pole(s) will be measured as the actual number of Pole(s) that are completely installed and accepted by the NJMC, including all necessary auxiliary equipment, including but not limited to foundation, stainless steel bolts, anchor bolts, nuts, washers and fasteners.

The quantity of the Pole(s) will be paid for at the Pole(s) unit price for each Pole that is completely installed and accepted by the NJMC. Price and payment will constitute full compensation for furnishing and placing all hardware components, including all necessary auxiliary equipments, including but not limited to foundation, stainless steel bolts, anchor bolts, nuts, washers and fasteners; and for all labor, equipment, tools and incidentals required to complete the installation.

6. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR AP-3

ITEM 413: ANTENNA POLE, TYPE C (40')

1. GENERAL

This specification sets forth the minimum requirements for Antenna Pole, Type C (40') that are used to mount antennas, transceivers, and cameras as part of the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR).

2. DESIGN SPECIFICATIONS

The Pole(s) shall be designed conforming to the 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 5th edition, incorporated herein by reference, as amended and supplemented.

The design shall utilize the following parameters:

- Design wind velocity - 80 m.p.h. (Appendix C)
- Design ice load - 3 p.s.f.
- Fatigue category – 2
- Design Life – 50 years

All loads applied to all members shall be taken into account for strength design, and all welded structural details shall been analyzed against fatigue. The design should consider, but is not limited to pole, hand hole, base plate, pole-to-base connection, anchor bolts and embedment.

Maximum horizontal deflection at the top of the pole completely assembled with wireless antennas, transceivers and all fixtures attached shall not exceed 2 inches from the center line due to a 40 mph (gust factor 1.3) wind speed (Appendix C wind pressure formula).

Submit detail plans and design calculations of antenna poles, manufacturer specified antenna/transceiver weight and projection area, and anchor bolt assembly for approval. Ensure the design calculations and working drawings are signed and sealed by a professional engineer licensed in the State of New Jersey.

3. MATERIALS

The steel pole shall be tapered and consist of one steel segment and contain only one longitudinal seam weld. Laminated tubes are not permitted.

The pole material shall conform to ASTM Specification A595, Grade A (minimum yield point 55 ksi. As an alternative, the pole (18 sided minimum) may be formed from steel conforming to ASTM A36 or A572 Grade 55. All other steel shall conform to ASTM Specification A709 (AASHTO M270) Grade 36 or Grade 50. All poles regardless of thickness and all steel plates greater than ½ inches thickness shall meet the AASHTO requirements for notch toughness (charpy testing) Zone 2. The pole shall be galvanized per ASTM A123 after fabrication.

Anchor bolt materials shall conform to ASTM F1554, Grade 55. The anchor bolts shall be galvanized per ASTM A153, Class C after threading for the full length of the bolt, as well as nuts and washers.

Stainless steel fasteners (including bolts, nuts and washers) shall conform to ASTM A320, Grade B8, Class 2 (ANSI Type 304) and strain hardened. Ensure all nuts lock type with sealing all threads.

The foundation shall conform to the New Jersey Department of Transportation (NJDOT) ITS Details ITSD-704-15. All concrete shall be "Class B" as defined in the NJDOT Standard Specifications for Road and Bridge Construction,

2007, unless otherwise specified by the Engineer.

4. INSTALLATION

Installation of the Pole(s) shall comply with the NJDOT Standard Specifications for Road and Bridge Construction, 2007.

The Pole(s) shall be installed in the area beyond recovery distance or behind the guide rail.

Provide neoprene door gasket.

Provide a galvanized screen, double rap around the base of pole. The galvanized screen shall have an opening of no more than ½ inches wide and be held together with stainless steel nuts, bolts and flat washers.

Grouting under the pole shall not be permitted.

Provide one (1) leveling hex nuts, two (2) hold-down hex nuts and one (2) flat washer per anchor bolt. Determine the proper length of the anchor bolt for projection and embedment. The clearance between the top of the foundation and the bottom of the leveling nut shall not exceed 1½ inches. The projection length shall be a minimum of 9 inches.

All welding shall conform to the ANSI/AWS D1.1 Structural Welding Code-Steel, with NJDOT amendments in NJDOT Standard Specifications. Welding inspection and full penetration weld nondestructive testing shall conform to AWS D1.1. All welding shall be done with E-80T-1 wire.

Refer to manufacturer's specifications for the weight and projection area of wireless antennas and wireless transceivers.

The tightening procedure for anchor bolts shall follow Section 6.9 of the 2005 FHWA "Guidelines for the Installation, Inspection, maintenance and Repair of Structural Supports for Highway Signs, Luminaries and Traffic Signals."

The Manufacturer or Contractor shall furnish any and all auxiliary equipment which they deem necessary for safe and reliable installation of the Standard, including but not limited to foundation, stainless steel bolts, anchor bolts, nuts, washers and fasteners.

5. MEASUREMENT AND PAYMENT

The following NJMC pay item shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
413	Antenna Pole, Type C (40')	Unit

The quantity of Pole(s) will be measured as the actual number of Pole(s) that are completely installed and accepted by the NJMC, including all necessary auxiliary equipments, including but not limited to foundation, stainless steel bolts, anchor bolts, nuts, washers and fasteners.

The quantity of the Pole(s) will be paid for at the unit price for each Pole that is completely installed and accepted by the NJMC. Price and payment will constitute full compensation for furnishing and placing all hardware components, including all necessary auxiliary equipments, including but not limited to foundation, stainless steel bolts, anchor bolts, nuts, washers and fasteners; and for all labor, equipment, tools and incidentals required to complete the installation.

6. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

NJMC SPECIFICATION
MASSTR ATC-4

ITEM 504a: TRAFFIC SIGNAL CABINET, TYPE P
ITEM 504b: TRAFFIC SIGNAL CABINET, TYPE K
ITEM 504c: TRAFFIC SIGNAL CABINET, CUSTOMIZED

1. GENERAL

This specification sets forth the minimum requirements for a traffic signal cabinet (Cabinet) hardware required by the Adaptive Traffic Control System (ATCS) that will be implemented by the Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR).

Within the Meadowland Transportation Planning District (TPD), a majority of the signalized intersections are currently equipped with NEMA TS1 or TS2-Type2 cabinets, and NEMA compliant traffic signal controllers that operate on various software programs. When a change out, conversion, or upgrade of an existing traffic signal cabinet is required by the ATCS for optimal operation, the proposed Cabinets shall at a minimum conform to the New Jersey Department of Transportation Specifications (NJDOT) for Eight Phase Traffic Signal Controller Assembly, NJDOT Specification No. EB-TSC-ITB-8, Section VIII.

More specifically, the Cabinet shall meet all applicable NMEA TS1 and TS2 standards and be capable of housing the controller, the conflict monitor, the vehicle detection system, and the Ethernet switch that are installed by MASSTR.

Cabinet dimensions and mounting options shall be as follows:

Item 504a, Type P – minimum 42”W x 26”D x 52”H, mounted on concrete foundation;
Item 504b, Type K – minimum 24”W x 15”D x 50”H, mounted on concrete foundation, pedestal, or pole;
Item 504c, Customized – minimum 20”W x 15”D x 36”H, mounted on concrete foundation, pedestal, or pole;

All equipment furnished under this specification must be current production equipment and of recent manufacturer and version, similar models of which are in field operation in the United States or Canada. Untried or prototype units shall not be considered for acceptance.

2. INSTALLATION

The installation shall comply with the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007. The Contractor shall securely bolt the Cabinet to the foundation in a vertical position using stainless steel hardware. The Contractor shall furnish any and all auxiliary equipment which they deem necessary for safe and reliable operation of the Cabinet, including but not limited to meter cabinet, foundation, pedestal, and stainless steel bolts.

3. MEASUREMENT AND PAYMENT

The following NJMC pay item shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
504a	Traffic Signal Cabinet, Type P	Unit
504b	Traffic Signal Cabinet, Type K	Unit
504c	Traffic Signal Cabinet, Customized	Unit

The quantity of Cabinet shall be measured as the actual number of Cabinets that are completely installed and accepted by the NJMC, and will be paid for at the Contract unit price for each Cabinet unit.

Price and payment shall constitute full compensation for furnishing and placing the Cabinet, including all necessary auxiliary equipment, meter cabinet, foundation, pedestal, and stainless steel bolts; and for all labor, equipment, tools and incidentals required to complete the installation.

4. MISCELLANEOUS

No changes or substitutions in these requirements shall be acceptable unless submitted in writing and authorized in writing by the NJMC. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

Meadowlands Adaptive Signal System for Traffic Reduction

MASSTR

NJDOT Standard Specifications

TIGER 2

October 2014

Prepared By

New Jersey Meadowlands Commission

P.O.Box 640, One DeKorte Park Plaza, Lyndhurst New Jersey 07071

www.njmeadowlands.gov

Part I. New Jersey Department of Transportation (NJDOT) Standard Specification for Road and Bridge Construction 2007

NJMC ITEM	ITEM NAME	NJMC ITEM	ITEM NAME
101	Maintenance and Protection of Traffic	641	Topsoiling, 2" Thick
102	Police Traffic Control	642	Fertilizing and Seeding
601	1 1/2" Rigid Metal Conduit	643	Straw Mulching
602	2" Rigid Metal Conduit	651	Lighting Standard Aluminum, 42'
603	3" Rigid Metal Conduit	652	Lighting Mast Arm Aluminum
611	18"x36" Junction Box	653	Junction Box Foundation
612	Meter Cabinet, Type T	654	Traffic Signal Cabinet Skirt, 18"
613	Foundation, Type SFK	701A	Fiber Optic Cable, Type A1
614	Foundation, Type MCF	701	Fiber Optic Cable, Type A
615	Traffic Signal Standard, Type C	702	Fiber Optic Cable, Type B
616	Traffic Signal Mast Arm, Aluminum	703	Fiber Optic Cable, Type C
617	Foundation, Type SFT	704	Fiber Optic Cable, Type D
618	Traffic Signal Standard, Type K	705	Fiber Optic Cable, Type E
619	Traffic Signal Standard, Type T	706	Fiber Optic Cable, Type F
620	Traffic Signal Head	711	Fiber Optic Patch Panel, 12 Port
621	Service Wire, No. 6 AWG	711A	Fiber Optic Patch Panel, 96 Port
622	Traffic Signal Cable, 2 Conductor	711B	Fiber Optic Patch Panel, 48 Port
623	Traffic Signal Cable, 5 Conductor	711C	Fiber Optic Patch Panel, 24 Port
624	Traffic Signal Cable, 10 Conductor	712	Fiber Optic Splice Enclosure
625	Ground Wire, No. 8 AWG	723	4" PVC Multiduct Conduit
626	Push Button	741A	Fiber Optic Cabinet, Single Door Double Sided
631	9"x18" Concrete Vertical Curb	742	Foundation, ITS Type A
632	Concrete Sidewalk, 4" Thick	743	Junction Box, ITS Type A
632A	Concrete Sidewalk, Reinforced, 6" Thick	744	Meter Cabinet ITS
633	Full Depth Concrete Pavement Repair, HMA	745	Foundation, ITS Type MC

All pay items shall conform to the NJDOT Standard Specification for Road and Bridge Construction 2007 (NJDOT SSRBC 2007), with the revisions marked in bold in the following:

Section 159.04 of the NJDOT SSRBC 2007 shall be revised to read as follows:

159.04 MEASUREMENT AND PAYMENT

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

Item	Description	Pay Unit
101	**MAINTENANCE AND PROTECTION OF TRAFFIC**	**LUMP SUM**
102	**POLICE TRAFFIC CONTROL**	**POLICE HOURS**

The Contractor is responsible for the payment of the hours incurred by a police officer(s) and all associated police costs required at the construction site. ***Police Traffic Control*** **is the designated pay item.**

The following sentence is added to Sections 701.03.02, 701.03.03, and Section 606.03.02 of the NJDOT SSRBC 2007:

All existing roadway and sidewalk surfaces shall be sawcut for conduit installation. The cost of sawcutting to be included in the unit price for various sidewalk and pavement pay items. All existing sidewalk shall be replaced in kind using tinted and/or imprinted concrete where applicable.

ITEM 701A: FIBER OPTIC CABLE, TYPE A1
ITEM 701: FIBER OPTIC CABLE, TYPE A
ITEM 702: FIBER OPTIC CABLE, TYPE B
ITEM 703: FIBER OPTIC CABLE, TYPE C
ITEM 704: FIBER OPTIC CABLE, TYPE D
ITEM 705: FIBER OPTIC CABLE, TYPE E
ITEM 706: FIBER OPTIC CABLE, TYPE F

September 2011, **Revised October 2014**

SECTION I - GENERAL

1-1 Ensure that the fiber optic cable used for outdoor applications is single mode single jacket single armor gel-free with loose buffer tubes and it meets or exceeds all applicable Standards.

When the fiber optic cable is not used for outdoor applications:
- Ensure that general use cable is resistant to the spread of fire and labeled OFN.
- Ensure that fiber optic cable installed in plenums, ducts or other space used for environmental air has fire-resistant and low smoke producing characteristics and is labeled OFNP.
- Ensure that fiber optic cable installed in risers, spaces used for vertical runs in a shaft or from floor to floor has fire-resistant characteristics capable of preventing the spreading of fire from floor to floor and is labeled OFNR.

1-2 Standards

- Electronic Industry Standards (EIA/TIA), EIA/TIA-455, EIA/TIA -472, EIA/TIA -598
- Fiber Optic Testing Parameters (FOTP)
- International Telecommunications Union (ITU), ITU G.652.D
- ASTM standards, ASTM D3349, ASTM D1248
- National Fire Protection Code (NFPA), NFPA 70, National Electrical Code (NEC)

1-3 Environmental

- Operating temperature range: -40 °F to +158 °F
- Installation temperature range: -22 °F to +158 °F
- Storage Temperature: -40 °F to +158 °F

SECTION II – CABLE CHARACTERISTICS

2-1 Ensure that the optical fibers are contained within loose, gel-free buffer tubes that are stranded around an all-dielectric central strength member.

2-2 Ensure that the cable core is a tensile strength member and is surrounded by a water swellable yarn.

2-3 Ensure that a high or medium density polyethylene outer jacket is provided for overall protection.

2-4 Ensure that the fiber optic cable includes the following components:

- Color coded single mode optical fibers.
- Gel-free color coded buffer tubes.
- Central strength member - glass reinforced plastic dielectric rod.
- Filler rod - medium or high density polyethylene.
- Stranding – buffer tubes stranded around central member and held in place with binders.

- Water- swellable yarn and tape that is non-nutritive to fungus, electrically non-conductive, non-toxic, dermatological safe and compatible with all other cable components.
- Core separator or binders - non-hygroscopic, non-wicking and dielectric with low shrinkage.
- Tensile outer strength member - high tensile strength aramid yarns and fiberglass helically stranded. evenly around the cable core
- Ripcord – minimum two ripcords, equally spaced (180° for 2)
- Outer jacket - HDPE or MDPE, co-extruded colored stripe, coded and labeled.
- Each optical fiber is to be distinguishable from others in the same buffer tube by means of color coding according to EIA/TIA -598-B color coding for fiber optic cable.
- In cables containing multiple buffer tubes each buffer tube is to be distinguishable from others in the same cable by means of color coding according to EIA/TIA -598 color coding for fiber optic cable.

2-5 Mechanical Characteristics

- Maximum tensile loading during installation: 600 lbf (also called loaded)
- Maximum tensile loading for the unloaded application: 130 lbf (also called installed)
- Minimum bending radius of during installation: 20 times the cable diameter
- Minimum bending radius for unloaded application: 10 times the cable diameter

2-6 Fiber Characteristics

Parameter	Single Mode Fiber
Type:	Step Index
Core diameter:	8.3 µm (nominal)
Cladding diameter:	125 µm ± 0.7 µm
Core to Cladding Concentricity:	≤ 0.5 µm
Cladding Non-circularity:	≤ 1.0 %
Coating Diameter:	245 µm ± 5 µm
Proof/ Tensile Test:	100 kpsi, minimum
Attenuation:	
@ 1310 nm	≤ 0.64 dB/mile (≤ or 0.4 dB/km)
@ 1550 nm	≤ 0.48 dB/mile (≤ or 0.3 dB/km)
Attenuation at the Water Peak:	≤ 2.1 dB/km @ 1383 ± 3 nm
Chromatic Dispersion:	
Zero Dispersion Wavelength	1302 to 1322 nm
Zero Dispersion Slope	0.092 ps/ (nm2•km)
Maximum Dispersion:	≤ 3.5 ps/ (nm•km for 1285-1330 nm ≤ 18 ps/ (nm•km) for 1550 nm
Cut-Off Wavelength:	<1260 nm
Mode Field Diameter:	9.2 ± 0.4 µm at 1310 µm 10.4 ± 0.8 µm at 1550 µm
Macro Bending Loss Measured on loose fiber of 100 turns of 75 mm diameter (tested in accordance with EIA-455-62):	< 0.05 dB @ 1310 nm < 0.10 dB @ 1550 nm

2-7 Buffer Tubes

-Minimum buffer tube diameter:	0.078 inch
-Maximum buffer tube diameter:	0.12 inch
-Fibers per tube:	2 – 12
-Tubes per cable:	1 – 24
-Water blocking protection:	Water-Swellable yarn

2-8 Outer Jacket

- Materials- For fiber optic cable designated for outdoor use application: high density or medium density polyethylene as defined by ASTM D1248, Type II, Class C, Category 4, Grade J4, E7 and E8. For fiber optic cable designated for other applications: Provide material meeting specifications under section 1-1.
- Minimum jacket thickness - 0.055 inch.
- Labeling: Additional parameters required on the label are:

  "NJDOT FIBER OPTIC CABLE"
  # FIBERS "FIBER"
  "SINGLE MODE"
  Manufacturer's name, Date of manufacture

- Sequential Cable labeling is to be printed on the cable outer jacket every two feet or as designated in the contract documents. Use capital letters for labeling with a text height of 0.1 inch.
- Use contrasting color to the cable jacket for marking.
- Co-extruded stripe color-coded with 0.04 inch stripe width.
- Provide ultra-violet light protection.

2-9 Cable Armor

Cable Armor to provide rodent and corrosion resistance while minimizing the susceptibility to lightning damage. Use of stranded wires in conjunction with tape armor is not permitted.

Design and Test Criteria:	ANSI/ICEA S-87-640
Material:	Electrolytically chrome coated, low carbon steel tape, coated with Polymer material on both sides
Application:	Corrugated Single armor applied longitudinally around outside of water-swellable tape with overlapping seam

2-10 Cable Types

Number of fibers, number of buffer tubes, number of fibers per buffer tube, outer jacket stripe color and outer diameter are to be as shown below:

FIBER OPTIC CABLE TYPE	NUMBER OF FIBERS	NUBMER OF BUFFER TUBES	NUMBER OF FIBERS PER BUFFER TUBE	OUTER JACKET TRIPE COLOR	NOMINAL OUTER DIAMETER
TYPE A1	**96**	**8**	**12**	**Green**	**0.63"**
TYPE A	48	8	6	Green	0.63"
TYPE B	36	6	6	Blue	0.55"
TYPE C	24	4	6	Orange	0.52"
TYPE D	18	3	6	White	0.52"
TYPE E	12	2	6	Red	0.52"
TYPE F	6	1	6	Red	0.52"

The manufacturer agrees to, upon the request of the Chief of Transportation, deliver to the NJMC, a **5**-foot sample of each fiber optic cable to be supplied in compliance with these specifications for inspection and test before acceptance. After completion of the test, the sample shall not be returned.

2-11 Components

When installing fiber optic cable, provide a complete communications path between 2 or more ITS devices. Installing fiber optic cable includes, but is not limited to, providing and installing cables, splicing, communication and power connections, service charges, terminations, software, and grounding.

At least 30 days before beginning work, submit to the RE for approval a fiber optic installation plan that lists the following items and includes a brief narrative on each:

1. Cable layout with splice locations and linear distances between splice points.
2. Fiber specific connection assignments to devices.
3. Catalogue cut of the cable lubricant.
4. The manufacturer's minimum allowable cable and fiber strand bending radii.
5. Pulley wheel sizes.
6. Manufacturer's maximum outer jacket pulling tensions and monitoring device.
7. If using an air pressure system, list the blowing pressures applied to each cable size and conduit type.
8. Provide certifications from the fiber optic splice unit, OTDR, and power meter equipment manufacturer that verify the qualifications of each individual employed to perform the work.

2-12 Installation

Before beginning the work and during the work, comply with the requirements of 701.03.01. The allowable time frame for existing system shutdown and the cost of damages for exceeding the allowable time frames is specified in the Special Provisions. The Department will recover the cost as specified in 107.16.

Provide and install the material necessary for a complete, functional installation including cables, cable ties, jumpers, cable identification tags, pigtails, breakout kits, connectors, splices, testing, end caps, consumables, attenuators, and related documentation. Ensure that cable tags follow the industry standard CLEI GR-485-CORE format and nomenclature for communications and electronic components.

After the connections are completed, provide the minimum amount of slack for each cable that enters a junction box or termination enclosure as specified in Table 701.03.15-1. Provide additional slack as required to meet the proposed installation as follows:

1. For an ITS Junction Box provide 30 feet of slack
2. For a Hub provide 10 feet of slack
3. For a Cabinet provide 3 feet of slack

Attach cable tags to cables at junction boxes that contain multiple cables and at all cabinets. Secure them with nylon cable ties.

For armored cables, install a ground rod, ground and bond all armor casings at any existing or proposed junction box at which electrical power conductors are also present.

Before installing the tracer wire, obtain RE approval of the installation locations of the tracer wire. Install a continuous tracer wire in the conduit. Do not splice tracer wire in the conduit. Provide 10 feet of slack in each junction box. If approved by the RE, the Contractor may splice the tracer wire in the junction box. If more than one conduit is installed in a single trench, the Contractor may install the tracer wire in only one conduit.

Ensure that splices are fusion splices. Install splices only in ITS junction boxes or ITS cabinets. Use splice enclosures for splices made in junction boxes. Cut only those individual fiber strands needed for connection to the devices.

For those fibers designated for trunk line communications, including all 48 and 96 strand cables, do not cut the fibers or install cables that require splices at lengths less than 20,000 feet, except where approved in writing by the NJMC Chief of Transportation.

Splice a fiber optic breakout kit with SC/LC type connectors to each end of the strands for a cable that terminates at a device cabinet. Label each strand using machine-printed, laminated, self-adhesive labels. Fully document the connections and individual splices in the as-built drawings.

2-13 Testing

Perform wiring and cable testing as specified in 701.03.15.D before performing any other testing. The Department will provide forms detailing the testing requirements for the following tests:

2-13A Level 1

Test each splice with the fusion splicing unit at the time the splice is made. Record each splice decibel value electronically with the splicing machine at 1310 nanometers. Provide 2 paper copies and 1 electronic copy of the results immediately to the RE for review and approval. Clearly identify each fiber on the report. Ensure that the maximum splice loss does not exceed 0.05 decibels. If the 0.05-decibel value cannot be reached in 3 attempts, the RE may employ a third party vendor to re-do the work with the costs deducted from the Contract. Provide the RE with certification from the equipment manufacturer that the splice machine was calibrated within 3 months of its use on the Contract. Recalibrate the splice machine at 6-month intervals.

2-13B Level 2

Perform the following Level 2 tests:

a. OTDR Test

Test each individual fiber after completion of all splicing and connections. Perform the testing at 1310 and 1550 nanometers in both directions. Ensure that the maximum decibel loss for any single event is not greater than 0.3 decibels at 1310 nanometers; however, ensure that the OTDR machine threshold is set to record all events greater than or equal in absolute value to 0.05 decibels along the positive and negative axes. Events revealed by the OTDR machine bi-directional trace average to exceed 0.3 decibels are cause for the rejection of the cable. If directed, remove and replace the cable.

Ensure that the net result of the bi-directional trace average at 1310 nanometers across a splice event is not greater than 0.15 decibels. Redo splices revealed by the OTDR machine to be greater than 0.15 decibels up to 2 additional times in order to achieve 0.15 decibels or less. If the 0.15-decibels value cannot be reached in 3 attempts, the RE may employ a third party vendor to re-do the work. The Department will recover the cost as specified in 107.16.

Ensure that reflectance at each connector is better than −55 decibels.

Ensure the fiber loss across each fiber segment is not greater than 0.4 decibels per kilometer when tested at 1310 nanometers.

Also test, and include in the report, the dark fiber segments that are not being utilized by the signal transmission equipment. Provide connectors as necessary to test unterminated fibers.

Provide 2 paper copies and 1 electronic copy of the results immediately to the RE for review and approval. Clearly identify each fiber on the report. Provide RE with certification from the equipment manufacturer that the OTDR was calibrated within 3 months of its use on the Contract. Recalibrate the OTDR at 6-month intervals.

b. Power Meter

Measure and record all fiber segment optical budgets including each end connector, according to the meter manufacturer instructions. Compile the test results in a binder and submit 2 copies with the final documentation. Perform power meter tests at 1310 nanometers and 1550 nanometers in both directions after completion of all cable and connector splicing. Ensure that the maximum connector loss tested at 1310 nanometers is 0.8 decibels with the average of all connectors in the tested fiber segment being 0.5 decibels.

Provide 2 paper copies and 1 electronic copy of the results immediately to the RE for review and approval. Clearly identify each fiber on the report and the work site location of the end points. Provide the RE with a certification from the equipment manufacturer that the power meters were calibrated within 3 months of their use on the Contract. Recalibrate at 6-month intervals.

Record the results of the testing on the Department provided forms. Within 5 days of completing the testing, submit the forms to the RE for approval. Do not begin subsequent testing until the previous testing has been approved by the RE.

2-13C Maintenance

Perform maintenance as specified in 704.03.01.D.

2-13D Final Documentation

Provide the following:

1. Individual splice connection as-built drawings in the format specified by the Department.

2. Splice machine, OTDR, and power meter readings with manufacturer's software disks to read the test results. Include power meter test results for each individual fiber section showing the optical budget between the termination point connectors. Include all unused fibers. Include OTDR electronic trace files and computer software so that the user can set any threshold values desired for all parameters and can view all ranges of events.

3. Cable identification key sheet.

4. Spreadsheets that identify the file names of the same fiber shot in both directions. Identify the individual common events and calculate the true event loss by averaging the point value of the fiber traces from each direction. Include this calculation in the spreadsheet tables. Supply 2 CD-R copies of the final documentation and 2 paper copies. Compile and organize the test results in 3-ring binders.

5. Licensed copies of splice and test equipment software. Ensure that the software is compatible with Windows XP & 7 operating systems.

6. Communications system equipment fiber optic interconnections, including patch panel cross connections.

7. Inventory Report on the form provided by the Department.

2-13E Equipment Training

Provide training as specified in 704.03.01.F and in the Special Provisions.

SECTION III – MEASUREMENT AND PAYMENT

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
701A	**Fiber Optic Cable, Type A1**	**Linear Foot**
701	Fiber Optic Cable, Type A	Linear Foot
702	Fiber Optic Cable, Type B	Linear Foot
703	Fiber Optic Cable, Type C	Linear Foot
704	Fiber Optic Cable, Type D	Linear Foot
705	Fiber Optic Cable, Type E	Linear Foot
706	Fiber Optic Cable, Type F	Linear Foot

The quantity of the Cable shall be measured as the actual linear feet installed and accepted, and shall be paid for at the Contract unit price per linear foot.

ITEM 711: FIBER OPTIC PATCH PANEL, 12 PORT
ITEM 711A: FIBER OPTIC PATCH PANEL, 96 PORT
ITEM 711B: FIBER OPTIC PATCH PANEL, 48 PORT
ITEM 711C: FIBER OPTIC PATCH PANEL, 24 PORT

September 2011, Revised **October 2014**

GENERAL - I

1-1 Standards

− Electronic Industry Standards (EIA/TIA)
− International Telegraph and Telephone Consultative Committee (CCITT)
− ANSI
− ASTM standards

1-2 Ensure that the Fiber Optic Patch Panel is designed for termination of single mode optical fibers with SC and/or LC Type connectors inside field equipment cabinets or equipment enclosure racks located within the buildings.

1-3 Ensure that the same model of Fiber Optic Patch Panel is in use for a minimum of three (3) years under conditions similar to State of New Jersey.

PATCH PANEL CHARACTERISTICS - II

2-1 Ensure that the patch panel includes the following accessories:
− Mounting bolts
− SC, LC Type receptacle, Interconnect sleeve or bulkhead adapter
− Jumper cables
− Fiber drawers (for 24/48 port patch panels)
− Fiber drawers (for 96 port patch panels)
− Storage for fiber (for 6 port fiber patch panel)
− Cable clamps with strain relief
− Flipcard for easier record keeping

The contractor is responsible for the installation of the fiber optic jumper cables that connect the patch panels to the Ethernet switch. Each fiber optic jumper cable shall be properly labeled. The label shall be approved by an NJMC representative before installation.

2-2 Ensure that the number of ports is as noted below:
− 6 port patch panel for 6 fiber cable termination
− 12 port patch panel for 8, 12 fiber cable termination
− 24 port patch panel for 18 or 24 fiber cable termination
− 48 port patch panel for 36 or 48 fiber cable termination
− 96 port patch panel for 96 fiber cable termination

Each individual port shall be properly labeled. The label shall be approved by an NJMC representative before installation.

2-3 Ensure that SC and /or LC Connectors are for single mode application, pre-radiused, zirconia ferrule, and metallic or composition body with strain relief boot. Ensure that the SC connector meets the following requirements:
− Operating temperature: -40° F to 140° F
− Insertion Loss: < 0.25 dB

− Reflectance: < -55 dB
− Durability: < 0.3dB change for > 200 matings

2-4 Ensure that **8/12**-port fiber patch panel provides for termination of **6 to 12** single mode optical fibers in field equipment cabinets. Ensure that the patch panels are **DIN rail mounted, including associated rail hardware and installation, with a maximum nominal size of 7″ high x6″ wide x 3″ deep**. Ensure that the storage compartment for excess fiber storage is lockable.

2-5 Ensure that 24/48/**96** port fiber patch panel is suitable for installation in EIA 19 inch rack. Ensure that the 24 port fiber patch panel does not exceed 6 inches in height and 18 inches in depth and the 48/**96** port fiber patch panel does not exceed 11 inches in height and 18 inches in depth. Ensure that the patch panel is constructed from 24 gauge (minimum) sheet metal, painted gray.

2-6 Ensure that 24/48/**96** port fiber patch panel has a clear front cover that is easily removable or opened to provide easy access for cable installation. Ensure that the cover is attached to panel enclosure via hinge or fastened thumbscrews. Ensure that the bottom/back panels provide openings for cable entrance, and provide for strain relief at each entrance point. Ensure that the patch panel provides drawers and other fixtures to maintain the minimum bending radius of fiber cables without strain placed on the cable.

2-7 Ensure that all SC and LC connectors on the patch panel and plug end on jumper cables are capped with an approved cap.

2-8 Ensure that jumper cables (patch cables) are compatible with single mode fiber and provided with factory installed SC and/or LC type single mode connectors. Ensure that the number of jumper cables is equal to the number of patch panel ports. Ensure that length of jumper cables connecting field equipment is as required for each connection. Ensure that spare jumper cables are 10 feet long. Ensure the fiber optic characteristics of the patch jumper cables meet the same requirements as the ITS Material Specifications for Fiber Optic Cable and manufacturers requirements.

2-9 No changes or substitutions in these requirements will be acceptable unless authorized in writing by the New Jersey Meadowlands Commission. Inquiries regarding this specification shall be addressed to the Chief of Transportation, New Jersey Meadowlands Commission.

2-10 The manufacturer agrees to, upon the request of the Chief of Transportation, deliver to the NJMC, a sample of the patch panel to be supplied in compliance with these specifications for inspection and test before acceptance. After completion of the test, the sample shall not be returned.

2-11 OTDR pigtail traces and power meter tests shall be conducted after the pigtail cables are spliced to the termination cable at both traffic signal cabinets.

MEASUREMENT AND PAYMENT - III

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
711	Fiber Optic Patch Panel , 12 Ports	Unit
711A	**Fiber Optic Patch Panel , 96 Ports**	**Unit**
711B	**Fiber Optic Patch Panel , 48 Ports**	**Unit**
711C	**Fiber Optic Patch Panel , 24 Ports**	**Unit**

The quantity of the patch panel shall be measured as the actual units installed and accepted, and shall be paid for at the Contract unit price.

ITEM 712: FIBER OPTIC SPLICE ENCLOSURE

September 2011, Revised April 2013

SECTION 1 - GENERAL

1-1 Standards

− Electronic Industry Standards (EIA/TIA)
− International Telegraph and Telephone Consultative Committee (CCITT)
− ANSI
− ASTM standards
− FDDI specifications
− UL

1-2 Ensure that the Splice Enclosure is a complete kit for fusion splicing the single mode optical fibers of loose tube fiber optic cables inside underground junction boxes in the field using fusion splicer.

1-3 Ensure that the Splice Enclosure is re-enterable and designed to hold spliced fibers packaged in a protective sieving and housing and pass through un-spliced fibers.

1-4 Ensure that Splice Enclosure is equipped with terminations for cable strength members and bonding wire.

1-5 Ensure that Splice Enclosure is in use for a minimum of three years under weather conditions similar to State of New Jersey and in underground junction boxes.

SECTION 2 - SPLICE ENCLOSURE CHARACTERISTICS

2-1 Mechanical:

− Nominal size: 8" Dia. x 28" Long
− Nominal weight: 5.0 to 9.0 lb

2-2 Environmental

- Ensure that Splice Enclosure has gasket-sealing technology that enables ease of installation and reentry requiring no special tools.
- Ensure that Splice Enclosure does not allow water entry when sprayed for fifteen minutes from a distance of one meter with water at a flow rate of 25 liters per minute at any angle.
- Ensure that Splice Enclosure does not allow water entry when immersed in a six feet head for seven days.
- Ensure that the Splice Enclosure is manufacturer certified for below ground, junction box (pull box) installation.
- Storage and operation temperature: -40°F to + 158°F
- Installation temperature: -22°F to + 158°F

2-3 Other Requirements

− Rigid non-filled case molded out of polyester/polycarbonate blend.
− Ensure that splice enclosure provides strain relief around the cable jacket and cable strength member.
− Ensure that splice enclosure is rodent proof, water proof, re-enterable and consist of moisture proof case.
− Ensure that all hardware is corrosion resistant aluminum or stainless steel.
− Ensure that splice enclosure is capable of holding hardware made from corrosion resistant aluminum or stainless steel.

− Ensure that splice enclosure is able to re-enter and re-assemble without the use of special tools.
− Ensure the number of cable entries meet project requirement at each location. 2 to 6 cables entries for 0.5″ to 1″ dia. loose tube single mode fiber optic cables are required.
− Ensure that splice enclosure meets minimum fiber bending radius requirements.
− Ensure grounding strap is provided.
− Ensure that splice enclosure is capable of holding fusion splice trays and slack baskets to organize and store splices.
− Ensure that splice enclosure is equipped with the necessary mounting hardware.
− Ensure that splice enclosure has air valve for flash testing.

2-4 Splice tray specifications

− 12/24-fiber fusion splice trays compatible with fusion splicing single mode optical fibers.
− Ensure that number of splice trays is sufficient to splice all fibers.
− Ensure that it is compatible with splice enclosure.
− Ensure that splice trays are stackable within the splice enclosure.
− Ensure that splice tray is designed to accommodate loose tube buffers secured with tube guide or channel snap.
− Ensure that no cable ties are required to secure loose tube buffers.

MEASUREMENT AND PAYMENT - III

The following NJMC pay items shall be measured and paid for under this specification:

NJMC Pay Item No.	Item Description	Pay Unit
712	Fiber Optic Splice Enclosure	Unit

The quantity of the splice enclosure shall be measured as the actual units installed and accepted, and shall be paid for at the Contract unit price.

Appendix D. SAMPLE FIBER-OPTIC CABLE ASSIGNMENTS AND TERMINATIONS

NJMC MASSTR Phase Four - US 1/9 (NJ3 to US46) Total Splices 354

Termination Cable Splicing

CTSS 973 US 1/9 and 43rd St
CTSS 972 US 1/9 and 46th St
CTSS 971 US 1/9 and 51st St
CTSS 970 US 1/9 and 61st St
CTSS 969 US 1/9 and 69th St

SPLICE ENCLOSURE	SPLICE SIDE A, BACKBONE				SPLICE SIDE-FIBER DROP CABLE												SPLICE SIDE B, BACKBONE				SPLICE DETAILS			SUBTOTAL SPLICES
	F/O CABLE	FIBER	COLOR		BL	OR	G	BR	S	W	R	BK	Y	V	RS	AQ	FIBER	COLOR		F/O CABLE	PATCH	SPLICE	TYPE	
	DIRECTION	COUNT	TUBE	FIBER	1	2	3	4	5	6	7	8	9	10	11	12	COUNT	TUBE	FIBER	DIRECTION	PANEL			
		1-12	BL	1-12	PASS THRU												1-12	BL	1-12					
		13-24	O	13-24	PASS THRU												13-24	O	13-24					
		25-36	G	25-36	PASS THRU												25-36	G	25-36					
		37	BR	BL	>						>						37	BR	BL		969-973	2x5	FUSION	
		38	BR	OR		<						<					38	BR	OR		969-974	2x5	FUSION	
		39	BR	G			>						>				39	BR	G		969-975	2x5	FUSION	60
		40	BR	BR				<						<			40	BR	BR		969-976	2x5	FUSION	
		41	BR	S					>						>		41	BR	S		969-977	2x5	FUSION	
		42	BR	W						<						<	42	BR	W		969-978	2x5	FUSION	
FSE-(969-973)	FOL-06	43	BR	R	PASS THRU												43	BR	R	FOL-06				
		44	BR	BK	PASS THRU												44	BR	BK					
		45	BR	Y	PASS THRU												45	BR	Y					
		46	BR	V	PASS THRU												46	BR	V					
		47	BR	RS	PASS THRU												47	BR	RS					
		48	BR	AQ	PASS THRU												48	BR	AQ					
		49-60	S	49-60	PASS THRU												49-60	S	49-60					
		61-72	W	61-72	PASS THRU												61-72	W	61-72					
		73-84	R	73-84	PASS THRU												73-84	R	73-84					
		85-96	BK	85-96	PASS THRU												85-96	BK	85-96					

Termination Cable Splicing

CTSS 967 US 1/9 and 74th St
CTSS 966 US 1/9 and 76th St
CTSS 965 US 1/9 and 79th St
CTSS 964 US 1/9 and 81st St

SPLICE ENCLOSURE	SPLICE SIDE A, BACKBONE				SPLICE SIDE-FIBER DROP CABLE												SPLICE SIDE B, BACKBONE				SPLICE DETAILS			SUBTOTAL SPLICES
	F/O CABLE	FIBER	COLOR		BL	OR	G	BR	S	W	R	BK	Y	V	RS	AQ	FIBER	COLOR		F/O CABLE	PATCH	SPLICE	TYPE	
	DIRECTION	COUNT	TUBE	FIBER	1	2	3	4	5	6	7	8	9	10	11	12	COUNT	TUBE	FIBER	DIRECTION	PANEL			
		1-12	BL	1-12	PASS THRU												1-12	BL	1-12					
		13-24	O	13-24	PASS THRU												13-24	O	13-24					
		25-36	G	25-36	PASS THRU												25-36	G	25-36					
		37	BR	BL	>						>						37	BR	BL		964-967	2x4	FUSION	
		38	BR	OR		<						<					38	BR	OR		964-968	2x4	FUSION	
		39	BR	G			>						>				39	BR	G		964-969	2x4	FUSION	
		40	BR	BR				<						<			40	BR	BR		964-970	2x4	FUSION	
		41	BR	S	PASS THRU												41	BR	S					48
		42	BR	W	PASS THRU												42	BR	W					
FSE-(964-967)	FOL-06	43	BR	R					>						>		43	BR	R	FOL-06	964-967	2x4	FUSION	
		44	BR	BK						<						<	44	BR	BK		964-968	2x4	FUSION	
		45	BR	Y	PASS THRU												45	BR	Y					
		46	BR	V	PASS THRU												46	BR	V					
		47	BR	RS	PASS THRU												47	BR	RS					
		48	BR	AQ	PASS THRU												48	BR	AQ					
		49-60	S	49-60	PASS THRU												49-60	S	49-60					
		61-72	W	61-72	PASS THRU												61-72	W	61-72					
		73-84	R	73-84	PASS THRU												73-84	R	73-84					
		85-96	BK	85-96	PASS THRU												85-96	BK	85-96					

Termination/Trunk Cable Splicing

CTSS 963 US 1/9 and 83rd St

SPLICE ENCLOSURE	SPLICE SIDE A, BACKBONE				SPLICE SIDE-FIBER DROP CABLE												SPLICE SIDE B, BACKBONE				SPLICE DETAILS			SUBTOTAL SPLICES
	F/O CABLE	FIBER	COLOR		BL	OR	G	BR	S	W	R	BK	Y	V	RS	AQ	FIBER	COLOR		F/O CABLE	PATCH	SPLICE	TYPE	
	DIRECTION	COUNT	TUBE	FIBER	1	2	3	4	5	6	7	8	9	10	11	12	COUNT	TUBE	FIBER	DIRECTION	PANEL			
		1-12	BL	1-12	DIRECT SPLICE												1-12	BL	1-12			12	FUSION	
		13-24	O	13-24	DIRECT SPLICE												13-24	O	13-24			12	FUSION	
		25-36	G	25-36	DIRECT SPLICE												25-36	G	25-36			12	FUSION	
		37	BR	BL	>						>						37	BR	BL		963	2	FUSION	
		38	BR	OR		<						<					38	BR	OR		963	2	FUSION	
		39	BR	G			>						>				39	BR	G		963	2	FUSION	
		40	BR	BR				<						<			40	BR	BR		963	2	FUSION	
		41	BR	S	DIRECT SPLICE												41	BR	S			1	FUSION	
		42	BR	W	DIRECT SPLICE												42	BR	W			1	FUSION	102
FSE-963	FOL-06	43	BR	R					>						>		43	BR	R	FOL-07	963	2	FUSION	
		44	BR	BK						<						<	44	BR	BK		963	2	FUSION	
		45	BR	Y	DIRECT SPLICE												45	BR	Y			1	FUSION	
		46	BR	V	DIRECT SPLICE												46	BR	V			1	FUSION	
		47	BR	RS	DIRECT SPLICE												47	BR	RS			1	FUSION	
		48	BR	AQ	DIRECT SPLICE												48	BR	AQ			1	FUSION	
		49-60	S	49-60	DIRECT SPLICE												49-60	S	49-60			12	FUSION	
		61-72	W	61-72	DIRECT SPLICE												61-72	W	61-72			12	FUSION	
		73-84	R	73-84	DIRECT SPLICE												73-84	R	73-84			12	FUSION	
		85-96	BK	85-96	DIRECT SPLICE												85-96	BK	85-96			12	FUSION	

SAMPLE

NJMC MASSTR Phase Four - US 1/9 (NJ3 to US46)
Termination Cable Assignments

Location:	973	US 1/9 and 43rd Street							
Fiber Patch Panel ID:	FPP-973								
Fiber Optic Patch Panels: 1			Total # of Ports: 6						
Fiber Optic Cable Terminated:			FODC-973						
	Color		Termination						
Fiber #	Tube	Fiber	Panel	Port	Network Utilization			Device Connection	Data Terminal Equipment
1	BL	BL	1	1	FO Reciver from	HUB 976	SB	SFP Gigabit Port 9	Aaxeon Switch - LNX-1212GN-SFP-T
2	BL	OR	1		FO Transmitter to				
3	BL	G	1	2	FO Reciver from	HUB 976	SB	Spare 1 Port 9	
4	BL	BR	1		FO Transmitter to				
5	BL	S	1	3	FO Reciver from	HUB 976	SB	Spare 2 Port 9	
6	BL	W	1		FO Transmitter to				
7	BL	R	1	4	FO Reciver from	972	NB	SFP Gigabit Port 10	Aaxeon Switch - LNX-1212GN-SFP-T
8	BL	BK	1		FO Transmitter to				
9	BL	Y	1	5	FO Reciver from	972	NB	Spare 1 Port 10	
10	BL	V	1		FO Transmitter to				
11	BL	RS	1	6	FO Reciver from	972	NB	Spare 2 Port 10	
12	BL	AQ	1		FO Transmitter to				

Termination Cable Assignments

Location:	972	US 1/9 and 46th Street							
Fiber Patch Panel ID:	FPP-972								
Fiber Optic Patch Panels: 1			Total # of Ports: 6						
Fiber Optic Cable Terminated:			FODC-972						
	Color		Termination						
Fiber #	Tube	Fiber	Panel	Port	Network Utilization			Device Connection	Data Terminal Equipment
1	BL	BL	1	1	FO Reciver from	973	SB	SFP Gigabit Port 9	Aaxeon Switch - LNX-1212GN-SFP-T
2	BL	OR	1		FO Transmitter to				
3	BL	G	1	2	FO Reciver from	973	SB	Spare 1 Port 9	
4	BL	BR	1		FO Transmitter to				
5	BL	S	1	3	FO Reciver from	973	SB	Spare 2 Port 9	
6	BL	W	1		FO Transmitter to				
7	BL	R	1	4	FO Reciver from	971	NB	SFP Gigabit Port 10	Aaxeon Switch - LNX-1212GN-SFP-T
8	BL	BK	1		FO Transmitter to				
9	BL	Y	1	5	FO Reciver from	971	NB	Spare 1 Port 10	
10	BL	V	1		FO Transmitter to				
11	BL	RS	1	6	FO Reciver from	971	NB	Spare 2 Port 10	
12	BL	AQ	1		FO Transmitter to				

Termination Cable Assignments

Location:	971	US 1/9 and 51st Street							
Fiber Patch Panel ID:	FPP-971								
Fiber Optic Patch Panels: 1			Total # of Ports: 6						
Fiber Optic Cable Terminated:			FODC-971						
	Color		Termination						
Fiber #	Tube	Fiber	Panel	Port	Network Utilization			Device Connection	Data Terminal Equipment
1	BL	BL	1	1	FO Reciver from	972	SB	SFP Gigabit Port 9	Aaxeon Switch - LNX-1212GN-SFP-T
2	BL	OR	1		FO Transmitter to				
3	BL	G	1	2	FO Reciver from	972	SB	Spare 1 Port 9	
4	BL	BR	1		FO Transmitter to				
5	BL	S	1	3	FO Reciver from	972	SB	Spare 2 Port 9	
6	BL	W	1		FO Transmitter to				
7	BL	R	1	4	FO Reciver from	970	NB	SFP Gigabit Port 10	Aaxeon Switch - LNX-1212GN-SFP-T
8	BL	BK	1		FO Transmitter to				
9	BL	Y	1	5	FO Reciver from	970	NB	Spare 1 Port 10	
10	BL	V	1		FO Transmitter to				
11	BL	RS	1	6	FO Reciver from	970	NB	Spare 2 Port 10	
12	BL	AQ	1		FO Transmitter to				

SAMPLE

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

		Page
I.	General	1
II.	Nondiscrimination	1
III.	Nonsegregated Facilities	3
IV.	Payment of Predetermined Minimum Wage	3
V.	Statements and Payrolls	5
VI.	Record of Materials, Supplies, and Labor	5
VII.	Subletting or Assigning the Contract	5
VIII.	Safety: Accident Prevention	6
IX.	False Statements Concerning Highway Projects	6
X.	Implementation of Clean Air Act and Federal Water Pollution Control Act	6
XI.	Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion	6
XII.	Certification Regarding Use of Contract Funds for Lobbying	8

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

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

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

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

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 minority group employees.

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

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

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed

in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

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

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

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

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

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

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

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

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

6. **Training and Promotion:**

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

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

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

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

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

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

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

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

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

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

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

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

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

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

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

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

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

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

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

b. The contractors will submit an annual report to the SHA

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

III. NONSEGREGATED FACILITIES

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

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

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

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

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

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

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

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

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

2. **Classification:**

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

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

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

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

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

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

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

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

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

3. **Payment of Fringe Benefits:**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

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

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

a. Apprentices:

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

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

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

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

b. Trainees:

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

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

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

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

c. Helpers:

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

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

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

6. **Withholding:**

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

7. **Overtime Requirements:**

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

8. **Violation:**

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

9. **Withholding for Unpaid Wages and Liquidated Damages:**

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

V. STATEMENTS AND PAYROLLS

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

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

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

2. **Payrolls and Payroll Records:**

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

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

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

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

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

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

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

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

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

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

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

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

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

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

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

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

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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

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

a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

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

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

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

VIII. SAFETY: ACCIDENT PREVENTION

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

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

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

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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

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

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

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

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

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

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

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

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

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

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

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

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

1. **Instructions for Certification - Primary Covered Transactions:**

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

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

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

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

transaction for cause of default.

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

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

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

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

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

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

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

*****

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

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

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

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

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

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

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

*****

2. **Instructions for Certification - Lower Tier Covered Transactions:**

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

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

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

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

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

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

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

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and

frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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

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

* * * * *

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

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

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

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

ATTACHMENT A - EMPLOYMENT PREFERENCE FOR APPALACHIAN CONTRACTS
(Applicable to Appalachian contracts only.)

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

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

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

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

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

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

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

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

General Decision Number: NJ140002 08/22/2014 NJ2

Superseded General Decision Number: NJ20130002

State: New Jersey

Construction Type: Highway

Counties: Bergen, Essex, Hudson, Hunterdon, Middlesex, Morris, Passaic, Somerset, Sussex, Union and Warren Counties in New Jersey.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/03/2014
1	06/13/2014
2	06/20/2014
3	07/11/2014
4	08/08/2014
5	08/22/2014

BRNJ0002-005 05/01/2013

BERGEN, ESSEX AND HUDSON COUNTIES; HUNTERDON COUNTY (north and west of a line drawn from Clover Hill, through Reaville, through Flemington, through High Bridge, through Califon, through Fairmont, to Pottersville); MIDDLESEX COUNTY (Borough of Dunellen; Township of Edison (Town of Oak Tree only); Township of Piscataway (Town of New Market only); Borough of South Plainfield); MORRIS AND PASSAIC COUNTIES; SOMERSET COUNTY (north of a line drawn from the point where the Lamington River leaves the boundary line between Hunterdon and Somerset Counties; then, continuing along the Lamington River to where it becomes the North Branch of the Raritan River; then, continuing along the North Branch of the Raritan River to where it becomes Chambers Brook; then, continuing along Chambers Brook until it becomes the boundary line between the Townships of Bernards and Bridgewater; then, continuing along the boundary line between the Townships of Bernards and Bridgewater, until that boundary line intersects with Route 78; then, continuing along Route 78 until Route 78 intersects with Route 525; then, continuing along Route 525 until Route 525 intersects with the boundary line between the Townships of Bridgewater and Warren; then, continuing along the boundary line between the Townships of Bridgewater and Warren until that boundary line intersects with Route 22; then, following Route 22 until Route 22 intersects with Sebrings Mills Rd. (also known as King George Rd.); then, continuing south on Sebrings Mills Rd. until it goes over Green Brook, which is the Middlesex County line); SUSSEX, UNION AND WARREN COUNTIES:

	Rates	Fringes

Bricklayer.....$ 38.25 27.39

Work 100 degrees F. and over:
to be paid at the rate of double time.

Work on high stacks:
22% per hour additional.

BRNJ0002-006 05/01/2013

HUNTERDON COUNTY (south and east of a line drawn from Clover Hill, through Reaville, through Flemington, through High Bridge, through Califon, through Fairmont, to Pottersville); MIDDLESEX COUNTY (does not include the Borough of Dunellen; Township of Edison (Town of Oak Tree); Township of Piscataway (Town of New Market); Borough of South Plainfield); SOMERSET COUNTY (south of a line drawn from the point where the Lamington River leaves the boundary line between Hunterdon and Somerset Counties; then, continuing along the Lamington River to where it becomes the North Branch of the Raritan River; then, continuing along the North Branch of the Raritan River to where it becomes Chambers Brook; then, continuing along Chambers Brook until it becomes the boundary line between the Townships of Bernards and Bridgewater; then, continuing along the boundary line between the Townships of Bernards and Bridgewater, until that boundary line intersects with Route 78; then, continuing along Route 78 until Route 78 intersects with Route 525; then, continuing along Route 525 until Route 525 intersects with the boundary line between the Townships of Bridgewater and Warren; then, continuing along the boundary line between the Townships of Bridgewater and Warren until that boundary line intersects with Route 22; then, continuing along Route 22 until Route 22 intersects with Sebrings Mills Rd. (also known as King George Rd.); then, continuing south along Sebrings Mills Rd. until it goes over Green Brook, which is the Middlesex County line):

	Rates	Fringes
Bricklayer	$ 38.25	27.39

Work 100 degrees F. and over:
to be paid at the rate of double time.

Work on high stacks:
22% per hour additional.

BRNJ0002-008 05/01/2013

BERGEN, ESSEX AND HUDSON COUNTIES; HUNTERDON COUNTY (north and west of a line drawn from Clover Hill, through Reaville, through Flemington, through High Bridge, through Califon, through Fairmont, to Pottersville); MIDDLESEX COUNTY (Borough of Dunellen; Township of Edison (Town of Oak Tree only);

Township of Piscataway (Town of New Market only); Borough of South Plainfield); MORRIS AND PASSAIC COUNTIES; SOMERSET COUNTY (north of a line drawn from the point where the Lamington River leaves the boundary line between Hunterdon and Somerset Counties; then, continuing along the Lamington River to where it becomes the North Branch of the Raritan River; then, continuing along the North Branch of the Raritan River to where it becomes Chambers Brook; then, continuing along Chambers Brook until it becomes the boundary line between the Townships of Bernards and Bridgewater; then, continuing along the boundary line between the Townships of Bernards and Bridgewater, until that boundary line intersects with Route 78; then, continuing along Route 78 until Route 78 intersects with Route 525; then, continuing along Route 525 until Route 525 intersects with the boundary line between the Townships of Bridgewater and Warren; then, continuing along the boundary line between the Townships of Bridgewater and Warren until that boundary line intersects with Route 22; then, continuing along Route 22 until Route 22 intersects with Sebrings Mills Rd. (also known as King George Rd.); then, continuing south on Sebrings Mills Rd. until it goes over Green Brook, which is the Middlesex County line); SUSSEX, UNION AND WARREN COUNTIES:

	Rates	Fringes
CEMENT MASON.....	$ 38.25	27.39

Cement mason:
  Epoxy, acid and latex work: $.50 per hour additional.

BRNJ0002-009 05/01/2013

HUNTERDON COUNTY (south and east of a line drawn from Clover Hill, through Reaville, through Flemington, through High Bridge, through Califon, through Fairmont, to Pottersville); MIDDLESEX COUNTY (does not include the Borough of Dunellen; Township of Edison (Town of Oak Tree); Township of Piscataway (Town of New Market); Borough of South Plainfield); SOMERSET COUNTY (south of a line drawn from the point where the Lamington River leaves the boundary line between Hunterdon and Somerset Counties; then, continuing along the Lamington River to where it becomes the North Branch of the Raritan River; then, continuing along the North Branch of the Raritan River to where it becomes Chambers Brook; then, continuing along Chambers Brook until it becomes the boundary line between the Townships of Bernards and Bridgewater; then, continuing along the boundary line between the Townships of Bernards and Bridgewater, until that boundary line intersects with Route 78; then, continuing along Route 78 until Route 78 intersects with Route 525; then, continuing along Route 525 until Route 525 intersects with the boundary line between the Townships of Bridgewater and Warren; then, continuing along the boundary line between the Townships of Bridgewater and Warren until that boundary line intersects with Route 22; then, continuing along Route 22 until Route 22 intersects with Sebrings Mills Rd.

(also known as King George Rd.); then, continuing south along Sebrings Mills Rd. until it goes over Green Brook, which is the Middlesex County line):

	Rates	Fringes
CEMENT MASON.....	$ 38.25	27.39

Cement mason:
  Epoxy, acid and latex work: $.50 per hour additional.

---

* CARP0006-008 05/01/2014

	Rates	Fringes
CARPENTER.....	$ 43.10	56%

CARP1556-001 05/01/2014

	Rates	Fringes
Piledriver		
Concrete form work.....	$ 37.00	33.20
All other work.....	$ 37.00	33.20

  Work on land pile driving, while handling and working with creosote and creosote-impregnated products: $.25 per hour additional.

  Work on hazardous/toxic/contaminated waste removal, on a hazardous/toxic/contaminated waste site, where the worker comes into contact with hazardous/toxic/contaminated waste material, and when A, B or C personal protective equipment is required and used for respiratory, skin or eye protection: 20% per hour additional.

ELEC0102-001 06/02/2014

HUNTERDON COUNTY (Townships of Alexandria and Bethlehem; Boroughs of Bloomsbury and Califon; Town of Clinton; Township of Clinton; Township of Delaware (west of a line following County Route 523 from the Delaware River north to the Raritan Township line); Township of East Amwell (east of State Hwy. 31); Township of Franklin; Boroughs of Frenchtown, Glen Gardner, Hampton and High Bridge; Townships of Holland and Kingwood; Borough of Lebanon; Township of Lebanon; Borough of Milford; Township of Raritan (east of State Hwy. 31 and north of County Route 523); Townships of Readington, Tewksbury and Union); MORRIS AND PASSAIC COUNTIES; SOMERSET COUNTY (does not include the Township of Franklin east of a line following Cedar Grove Lane from the Raritan River, in a southwesterly direction, to the Millstone Branch of the Pennsylvania Railroad; then, west along the railroad to the Delaware and Raritan Canal; then, south along the canal to the Middlesex

County line; does not include the Township of Montgomery west and south of a line following U.S. Hwy. 206 (formerly State Hwy. 31) north from the Mercer County line to Harlingen Rd.; then, west along Harlingen Rd. and the Dutchtown-Zion road to the Hillsborough township line); SUSSEX, UNION AND WARREN COUNTIES:

	Rates	Fringes
Line construction:		
High-tension pipe-type cable installation:		
Cable splicer	$ 56.66	55.45%
Ground person	$ 30.19	55.45%
Groundman	$ 30.19	55.45%
Line technician; equipment operator; x-ray technician; equipment repair person; equipment service person; hole-digging equipment operator; truck with winch or pole and steel hand; truck without winch	$ 51.42	55.45%
Line technician-welder	$ 53.99	55.45%
All other work:		
Cable splicer	$ 56.66	55.45%
Groundman	$ 30.19	55.45%
Line technician; equipment operator	$ 51.42	55.45%
Line technician-welder	$ 53.99	55.45%

Work with, or the removal of, asbestos materials: 112% times the journeyman rate.

ELEC0102-002 06/02/2014

HUNTERDON COUNTY (Townships of Alexandria and Bethlehem; Boroughs of Bloomsbury and Califon; Town of Clinton; Township of Clinton; Township of Delaware (west of a line following County Route 523 from the Delaware River north to the Raritan Township line); Township of East Amwell (east of State Hwy. 31); Township of Franklin; Boroughs of Frenchtown, Glen Gardner, Hampton and High Bridge; Townships of Holland and Kingwood; Borough of Lebanon; Township of Lebanon; Borough of Milford; Township of Raritan (east of State Hwy. 31 and north of County Route 523); Townships of Readington, Tewksbury and Union); MORRIS AND PASSAIC COUNTIES; SOMERSET COUNTY (does not include the Township of Franklin east of a line following Cedar Grove Lane from the Raritan River, in a southwesterly direction, to the Millstone Branch of the Pennsylvania Railroad; then, west along the railroad to the Delaware and Raritan Canal; then, south along the canal to the Middlesex County line; does not include the Township of Montgomery west and south of a line following U.S. Hwy. 206 (formerly State

Hwy. 31) north from the Mercer County line to Harlingen Rd.; then, west along Harlingen Rd. and the Dutchtown-Zion road to the Hillsborough township line); SUSSEX, UNION AND WARREN COUNTIES:

	Rates	Fringes
Electricians:		
All other work:		
Cable Splicer	$ 56.29	56.2%
Electrician	$ 51.17	56.2%

Work forty ft. or more above the ground or protective rigging (does not apply to pole work, or to use of a manlift or high reach-type lift): 10% per hour additional.

Work with, or the removal of, asbestos materials: 112% times the journeyman rate.

ELEC0164-002 06/03/2013

BERGEN, ESSEX AND HUDSON COUNTIES:

	Rates	Fringes
Electricians:		
Electrician	$ 48.99	62%
All other work:		
Cable splicer	$ 48.99	62%

Work on line voltage of 440 or 480 volts: 10% per hour additional.

Work from trusses, scaffolds, frames, ladders and poles, 40 ft. or more above the ground or floor (does not include work from a manlift): 20% per hour additional.

Work on radio towers, transmission towers and smokestacks: 21% per hour additional.

ELEC0164-010 06/02/2008

BERGEN, ESSEX AND HUDSON COUNTIES:

	Rates	Fringes
Line construction:		
Cable splicer	$ 54.00	54%
Groundman (includes empty conduit installations on roadways)	$ 30.75	54%
Layout Man	$ 50.03	54%
Lineman; lineman-welder; x-ray technician; equipment		

repairman; equipment
serviceman.....$ 45.90 54%

Work on live wires of 440 or 480 volts: 10% per hour additional.

Work on radio towers, transmission towers and smokestacks: 21% per hour additional.

ELEC0269-010 01/01/2014

HUNTERDON COUNTY (Township of Delaware (east of a line following County Route 523 from the Delaware River north to the Raritan Township line); Township of East Amwell (west of State Hwy. 31); Borough of Flemington; City of Lambertville; Township of Raritan (west of State Hwy. 31 and south of County Route 523); Borough of Stockton; Township of West Amwell); SOMERSET COUNTY (Township of Montgomery (west and south of a line following U.S. Hwy. 206 (formerly State Hwy. 31) north from the Mercer County line to Harlingen Rd.; then, west along Harlingen Rd. and the Dutchtown-Zion road to the Hillsborough township line):

	Rates	Fringes
Electrician	$ 47.96	60.93%

ELEC0269-013 01/01/2014

HUNTERDON COUNTY (Township of Delaware (east of a line following County Route 523 from the Delaware River north to the Raritan Township line); Township of East Amwell (west of State Hwy. 31); Borough of Flemington; City of Lambertville; Township of Raritan (west of State Hwy. 31 and south of County Route 523); Borough of Stockton; Township of West Amwell); SOMERSET COUNTY (Township of Montgomery (west and south of a line following U.S. Hwy. 206 (formerly State Hwy. 31) north from the Mercer County line to Harlingen Rd.; then, west along Harlingen Rd. and the Dutchtown-Zion road to the Hillsborough township line):

	Rates	Fringes
Line construction:		
Continuous pipe-type underground oil-filled transmission conduit installations:		
Ground person; truck with winch operator	$ 38.37	60.93
Line technician; cable splicer; heavy equipment operator	$ 47.96	60.93
All other work:		

Ground person; truck with
winch operator.....$ 38.37 60.93
Line technician; cable
splicer; heavy equipment
operator.....$ 47.96 60.93

ELEC0456-001 06/03/2013

MIDDLESEX COUNTY; SOMERSET COUNTY (Township of Franklin (east of a line following Cedar Grove Lane from the Raritan River, in a southwesterly direction, to the Millstone Branch of the Pennsylvania Railroad; then, west along the railroad to the Delaware and Raritan Canal; then, south along the canal to the Middlesex County line)):

	Rates	Fringes
Electricians:		
Cable splicer	$ 50.48	66%
Electrician	$ 46.33	67.25%

Work on line voltage of 440 volts and over: 10% per hour additional.

Work from trusses, scaffolds and ladders 40 ft. or more from the ground or floor; or under air pressure; or over conveyors or moving equipment or machinery: 10% per hour additional.

ELEC0456-002 06/03/2013

MIDDLESEX COUNTY; SOMERSET COUNTY (Township of Franklin (east of a line following Cedar Grove Lane from the Raritan River, in a southwesterly direction, to the Millstone Branch of the Pennsylvania Railroad; then, west along the railroad to the Delaware and Raritan Canal; then, south along the canal to the Middlesex County line)):

	Rates	Fringes
Line construction:		
Continuous pipe-type underground oil-filled transmission conduit installations:		
Cable splicer	$ 50.48	66%
Crane Operator	$ 50.48	66%
Groundman (when installing conduit on public roadways)	$ 26.80	66%
Groundman; winch operator	$ 43.88	66%
Line technician; x-ray technician; equipment repair person; equipment		

serviceperson; electrical
installation worker; hole-
digging equipment
operator; truck operator
with winch or pole; truck
operator without winch.....$ 44.67 66%

All other work:

Cable splicer.....$ 50.48 66%

Crane Operator.....$ 50.48 66%

Groundman (when
installing conduit on
public roadways).....$ 26.80 66%

Groundman43.98; winch
operator.....$ 43.88 66%

Line technician.....$ 46.33 67.25%

ENGI0825-004 07/01/2013

	Rates	Fringes
Power equipment operators:		
Steel erection:		
GROUP 1	$ 47.09	28.50
GROUP 2	$ 45.43	28.50
GROUP 3	$ 46.70	28.50
GROUP 4	$ 42.64	28.50
GROUP 5	$ 39.98	28.50
GROUP 6	$ 38.45	28.50
GROUP 7	$ 36.69	28.50

Hazardous waste removal work:
Work on a state or federally designated hazardous waste site, where the worker is in direct contact with hazardous material, and when personal protective equipment is required for respiratory, skin and eye protection: 20% per hour additional.

PAID HOLIDAYS:
New Year's Day, Washington's Birthday observed, Memorial Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided 1) that the worker works three of the preceding five work days before the holiday; or, the work day before the holiday and the work day after the holiday; and, 2) that the worker works the work day before and the work day after the holiday.

DEFINITION OF GROUPS:

GROUP 1:
Cranes (all cranes, land or floating with boom including jib, 140 ft. and over, above ground); derricks (all derricks, land, floating or Chicago boom type with boom including jib, 140 ft. and over, above ground)

GROUP 2:
Cranes (all cranes, land or floating with boom including jib, less than 140 ft. above ground); derricks (all derricks, land, floating or Chicago boom type with boom including jib, less than 140 ft. above ground)

GROUP 3:
Helicopter pilot

GROUP 4:
"A" frame; cherry picker (10 ton and under); hoist (all types of hoist, including steam, gas, diesel, electric, air, hydraulic, single and double drum, concrete, brick shaft caisson, or any other similar type of hoisting machine, portable or stationary, except Chicago boom type); jack (screw, air, hydraulic power-operated unit or console type (not hand jack or pile load test type); side boom; straddle carrier

GROUP 5:
Aerial platform used as a hoist; compressor, two or three in battery; directional boring machine; elevator or house car; concrete cleaning/decontamination machine operator, decontamination and remediation work only; conveyor and tugger hoist; firefighter; forklift; generator, two or three in battery; heavy equipment robotic operator/technician, decontamination and remediation work only; maintenance, utility person; master environmental maintenance technician, decontamination and remediation work only; rod bending machine (power); ultra high-pressure waterjet cutting tool system operator/maintenance technician, decontamination and remediation work only; vacuum blasting machine operator/maintenance technician, decontamination and remediation work only; welding machine (gas or electric, two or three in battery, including diesel); captain, power boat; tug master, power boat; oiler, with either one compressor or one welding machine

GROUP 6:
Compressor, single; off-road back dump; welding machine (single, gas, diesel and electric converters of any type); welding system, multiple (rectifier, transformer type); generator, single

GROUP 7:
Oiler; deckhand

ENGI0825-009 07/01/2013

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 43.07	28.50
GROUP 2	$ 41.48	28.50
GROUP 3	$ 39.57	28.50
GROUP 4	$ 37.94	28.50

GROUP 5.....$ 36.23 28.50
GROUP 6.....$ 43.84 27.25

Hazardous waste removal work:
Work on a state or federally designated hazardous waste site, where the worker is in direct contact with hazardous material, and when personal protective equipment is required for respiratory, skin and eye protection: 20% per hour additional.

PAID HOLIDAYS:
New Year's Day, Washington's Birthday observed, Memorial Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided 1) that the worker works three of the preceding five work days before the holiday; or, the work day before the holiday and the work day after the holiday; and, 2) that the worker works the work day before and the work day after the holiday.

DEFINITION OF GROUPS:

GROUP 1:
Autograde - combination subgrader; base metal spreader and base trimmer (CMI and similar types); autograde placer - trimmer spreader combination (CMI and similar types); autograde slipform paver (CMI and similar types); backhoe; central power plant (all types); concrete paving machine; crane (all types, including overhead and straddle traveling type); crane, gantry; derrick (land, floating or Chicago boom type); drillmaster, quarrymaster (down-the-hole drill, rotary drill, self-propelled hydraulic drill, self-powered drill); dragline; elevating grader; front end loader (5 cu. yd. and over); gradall; grader, raygo; locomotive (large); mucking machine; pavement and concrete breaker (superhammer and hoe ram); pile driver (length of boom, including length of leads, shall determine premium rate applicable); roadway surface grinder; scooper (loader and shovel); shovel; tree chopper with boom; trench machine (cable plow)

GROUP 2:
"A" frame/backhoe combination; boom attachment on loader (rate based on size of bucket, not applicable to pipehook); boring and drilling machine; brush chopper, shredder and tree shredder; carryall; concrete pump; concrete pumping system, pumpcrete and similar type; conveyor, 125 ft. and over; drill doctor, including dust collecting and maintenance work); front end loader (2 cu. yd. but less than 5 cu. yd.); grader (finish); groove cutting machine (ride-on type); heater planer; hoist (all types of hoist, shall also include steam, gas, diesel, electric, air, hydraulic, single and double drum, concrete, brick shaft caisson, snorkel roof, and/or any other similar type hoisting machine, portable or stationary, except Chicago boom type) (if hoist is "outside material tower hoist",

long boom rate is to be applied); hydraulic crane, 10 tons and under; hydro-axe; hydro-blaster; jack (screw, air, hydraulic power-operated unit or console type (not hand jack or pile load test type); log skidder; pan; pavers (all) (concrete); plate and frame filter press; pumpcrete machine; squeezecrete; concrete pump (regardless of size); scraper; side boom; straddle carrier, Ross and similar type; whip hammer; winch truck (hoisting)

GROUP 3:

Asphalt curbing machine; asphalt plant engineer; asphalt spreader; autograde tube finishing and texturing machine (CMI and similar types); autograde curecrete machine (CMI and similar types); autograde curb trimmer and sidewalk, shoulder, slipform (CMI and similar types); bar bending machine (power); batcher; batching plant and crusher on site; belt conveyor system; boom-type skimmer machine; bridge deck finisher; bulldozers (all); car dumper (railroad); compressor and blower-type unit (used independently or mounted on dual-purpose truck, on jobsite or in conjunction with jobsite, in loading and unloading of concrete, cement, fly ash, instantcrete, or similar type materials); compressor (2 or 3) (in battery) (within 100 ft.); concrete cleaning/decontamination machine operator, when used for decontamination and remediation; concrete finishing machine; concrete saw and cutter (ride-on type); concrete spreader, hetzel, rexomatic and similar type; concrete vibrator; conveyor, under 125 ft.; crushing machine; directional boring machine; ditching machine, small (Ditchwitch, Vermeer or similar type); dope pot (mechanical with or without pump); dumpster; elevator; firefighter; forklift (Economobile, Lull and similar type of equipment); front end loader (1 cu. yd. and over but less than 2 cu. yd.); generator (2 or 3) (in battery) (within 100 ft.); giraffe grinder; grader and motor patrol; gunite machine (does not include nozzle); hammer, vibratory (in conjunction with generator); heavy equipment robotic operator/technician, when used for decontamination and remediation; hoist (roof, tugger, aerial platform hoist and house cars); hopper; hopper door (power-operated); ladder (motorized); laddervator; locomotive, dinky type; maintenance, utility person; master environmental maintenance technician, when used for decontamination and remediation; mechanic; mixer (except paving mixer); pavement breaker, small, self-propelled ride-on type (also maintains compressor on hydraulic unit); pavement breaker, truck-mounted; pipe bending machine (power); pitch pump; plaster pump, regardless of size; posthole digger (post pounder and auger); rod bending machine (power); roller, blacktop; scale, power; seaman pulverizing mixer; shoulder widener; silo; skimmer machine (boom type); steel cutting machine, servicing and maintaining; tractor; captain, power boat; tug master, power boat; ultra high-pressure waterjet cutting tool system operator/maintenance technician, when used for decontamination and remediation; vacuum blasting machine operator/maintenance technician, when used for decontamination and remediation; vibrating plant (used in

conjunction with unloading); welder and repair mechanic

GROUP 4:
Broom and sweeper; chipper; compressor (single); concrete spreader (small type); conveyor loader (does not include elevating grader); engine, large diesel (1620 H.P.) and staging pump; farm tractor; fertilizing equipment (operation and maintenance of); fine grade machine (small type); form line grader (small type); front end loader (under 1 cu. yd.); generator (single); grease, gas, fuel and oil supply truck; heater (Nelson or other type including propane, natural gas or flow-type unit); lights (portable generating light plant); mixer, concrete, small; mulching equipment (operation and maintenance of); off-road back dump; pump (4-in. suction and over, including submersible pump); pump (diesel engine and hydraulic) (immaterial of power); road finishing machine (small type); roller, grade, fill or stone base; seeding equipment (operation and maintenance of); sprinkler and water pump truck; steam jenny and boiler; stone spreader; tamping machine, vibrating ride-on; temporary heating plant (Nelson or other type, including propane, natural gas or flow-type unit); welding machine (gas, diesel, and/or electric converter of any type) (single, or two or three in a battery) (within 100 ft.); welding system, multiple (rectifier, transformer type); wellpoint system

GROUP 5:
Oiler; tire repair and maintenance

GROUP 6:
Helicopter pilot; helicopter engineer

IRON0011-002 08/01/2012

BERGEN, ESSEX, HUDSON AND HUNTERDON COUNTIES; MIDDLESEX COUNTY (north half); MORRIS AND PASSAIC COUNTIES; SOMERSET COUNTY (north half); SUSSEX AND UNION COUNTIES:

	Rates	Fringes
Ironworkers:		
Reinforcing	$ 40.74	39.40
Structural	$ 43.54	39.40

IRON0036-003 07/01/2012

WARREN COUNTY

	Rates	Fringes
Ironworkers:	$ 34.05	24.00

IRON0068-004 07/01/2013

MIDDLESEX COUNTY (south half); SOMERSET COUNTY (south half):

	Rates	Fringes
Ironworker	$ 42.40	20.03

Hazardous waste removal work, on a state or federally designated hazardous waste site, where the worker is required to wear Level A, B or C personal protection: $3.00 per hour additional.

LABO0172-005 09/01/2012

	Rates	Fringes
Laborers:		
GROUP 1	$ 33.20	22.40
GROUP 2	$ 33.90	22.40
GROUP 3	$ 34.15	22.40
GROUP 4	$ 37.70	22.40

Hazardous waste removal work:
Work on a state or federally designated hazardous waste site, where the worker is required to wear Level A, B or C personal protection: $3.00 per hour additional.

Work on a state or federally designated hazardous waste site, where the worker is not required to wear Level A, B, or C personal protection: $1.00 per hour additional.

PAID HOLIDAYS:
New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided that the worker works three days for the same employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

DEFINITION OF GROUPS:

GROUP 1:
Basic laborer; landscape laborer; railroad track laborer; utility meter installer; traffic director/flag person; salamander tender; pit person; dump person; asphalt laborer (only in Bergen, Essex, Hudson and Hunterdon Counties; Middlesex County (north of the Raritan River); Morris, Passaic, Somerset, Sussex, Union and Warren Counties); slurry seal laborer (only in Bergen, Essex, Hudson and Hunterdon Counties; Middlesex County (north of the Raritan River); Morris, Passaic, Somerset, Sussex, Union and Warren Counties); raker and tamper on cold patch work; wrapper and coater of pipe; waterproofing laborer; timber person; powder carrier; magazine tender; signal person; power buggy

operator; tree cutter; and the operation of such other basic power tools used to perform work usually done manually by laborers

GROUP 2:
Pipelayer; laser person; conduit and duct line layer; jackhammer; chipping hammer; pavement breaker; concrete cutter; asphalt cutter; sheet hammer operator; sandblasting, acetylene cutting and burning; wagon drill operator; directional drill operator; hydraulic drill operator; drill master; core driller; traffic control coordinator; asphalt raker/lute person (only in Bergen, Essex, Hudson and Hunterdon Counties; Middlesex County (north of the Raritan River); Morris, Passaic, Somerset, Sussex, Union and Warren Counties); walk-behind saw cutter

GROUP 3:
Finisher; rammer; setter of brick or stone pavers; hardscaping; gunite nozzle person; stonecutter; form setter; manhole; catch basin and inlet builder; asphalt screedperson (only in Bergen, Essex, Hudson and Hunterdon Counties; Middlesex County (north of the Raritan River); Morris, Passaic, Somerset, Sussex, Union and Warren Counties)

GROUP 4:
Blaster

LABO0172-006 03/01/2011

MIDDLESEX COUNTY (south of the Raritan River):

	Rates	Fringes
Laborers:		
ASPHALT WORK:		
GROUP 1	$ 33.00	21.55
GROUP 2	$ 32.60	21.55
GROUP 3	$ 32.85	21.55
GROUP 4	$ 32.70	21.55
GROUP 5	$ 32.90	21.55

PAID HOLIDAYS:
New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided that the worker works three days for the same employer within a period of ten working days, consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

DEFINITION OF GROUPS:

GROUP 1:
Head raker

GROUP 2:
Painter, shoveler, roller person, kettle person, smother person, tamper

GROUP 3:
Raker, screed person, lute person

GROUP 4:
Milling controller

GROUP 5:
Traffic control coordinator

PAIN0711-009 05/01/2014

	Rates	Fringes
Painters:		
Work on bridges (all bridges that span major waterways, railroad bridges, bridges over canyons, overpasses)	$ 50.68	22.30

PAIN0711-014 05/01/2011

	Rates	Fringes
Painters:		
All other work:		
Brush and roller	$ 35.99	16.86
Spray	$ 38.91	17.19

PLAS0029-001 05/01/2012

BERGEN, ESSEX, HUDSON, MORRIS, PASSAIC, SUSSEX, UNION AND WARREN COUNTIES:

	Rates	Fringes
CEMENT MASON	$ 40.30	22.05

Cement masons:
Work on suspended staging, not supported from the ground: $.50 per hour additional.

PLAS0592-030 05/01/2014

HUNTERDON, MIDDLESEX, SOMERSET AND UNION COUNTIES:

	Rates	Fringes
Cement mason	$ 38.52	30.21

TEAM0408-001 11/01/2012

ESSEX, MORRIS, SUSSEX AND UNION COUNTIES:

	Rates	Fringes
Truck drivers:		
Group 1	$ 34.05	18.73+a
Group 2	$ 33.95	18.73+a
Group 3	$ 34.85	18.73+a
Group 4	$ 34.80	18.73+a

a. Employer contributes $1472.15 per month per worker for health and welfare.

Hazardous waste removal work, where the worker is in direct contact with hazardous material, and when personal protective equipment is required for respiratory, skin and eye protection: $3.00 per hour additional.

Hazardous waste removal work, where the worker is working in a hazardous waste site, in a zone requiring Level A personal protection for any of the workers: $3.00 per hour additional.

Hazardous waste removal work, where the worker is not working in a zone requiring Level A, B or C personal protection: $1.00 per hour additional.

PAID HOLIDAYS:
New Year's Day, President's Day, Decoration Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided that the worker has been assigned to work, or, "shapes", one day of the calendar week during which the holiday occurs.

DEFINITION OF GROUPS:

GROUP 1:
Winch trailer driver

GROUP 2:
Drivers of all Euclid-type vehicles: Euclid, International Harvester, Wabco, Caterpillar, Koehring, tractor and wagon; dumpster; bottom, rear and side dump; carry-all and scraper (not self-loading, loading over the top); water sprinkler trailer; water pull and similar types of vehicle; driver of tractor and trailer-type vehicles: flat, float, I-beam, low bed, water sprinkler, bituminous, transit mix, road oil, fuel, bottom dump hopper, rear dump, office, shanty, epoxy, asphalt, agitator mixer, mulching, stringing, seeding, fertilizing, pole, spread bituminous distributor, water pull (entire unit), tractor trailer, reel trailer and similar types of vehicle

GROUP 3:
Driver on straight three-axle materials: truck and float

GROUP 4:
Truck driver; driver of the following types of vehicles: dump, flat, float, pick-up, container hauler, fuel, water sprinkler, road oil, stringer bead, hot pass, bus, dumpcrete, transit mixer, agitator mixer, half track, winch truck, side-o-matic, dynamite, powder, x-ray, welding, skid, jeep, station wagon, A-frame, dual purpose truck, truck with mechanical tailgate, asphalt distributor, batch truck, seeding, mulching, fertilizing, air compressor truck (in transit); parts chaser; escort; scissor; hi-lift; telescope; concrete breaker; gin pole; stone, sand, asphalt distributor and spreader; nipper; fuel truck (driver of fuel truck including handling of hose and nozzle - entire unit); team driver; vacuum or vac-all truck (entire unit); skid truck (debris container - entire unit); concrete mobile truck (entire unit); beltcrete truck; pumpcrete truck; line truck; reel truck; wrecker or tow truck; utility truck; tack truck; lift truuk; cardex person; drivers on the following types of vehicle: Broyhill coal tar epoxy truck, Littleford bituminous distributor, slurry seal truck or vehicle, thiokol track master pick-up (swamp cat pick-up), bucket loader, dump truck and any rubber-tired tractor used in pulling and towing farm wagons and trailers of any description; on-site repair shop

---

TEAM0469-001 05/01/2011

HUNTERDON, MIDDLESEX AND SOMERSET COUNTIES; UNION COUNTY (south of Wood Ave.); WARREN COUNTY:

	Rates	Fringes
Truck drivers:		
Group 1	$ 34.85	24.385
Group 2	$ 34.75	24.385
Group 3	$ 34.65	24.385
Group 4	$ 34.60	24.385

Hazardous waste removal work, where the worker is in direct contact with hazardous material, and when personal protective equipment is required for respiratory, skin and eye protection: $3.00 per hour additional.

Hazardous waste removal work, where the worker is working in a hazardous waste site, in a zone requiring Level A personal protection for any of the workers: $3.00 per hour additional.

Hazardous waste removal work, where the worker is not working in a zone requiring Level A, B or C personal protection: $1.00 per hour additional.

PAID HOLIDAYS:

New Year's Day, President's Day, Decoration Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided that the worker has been assigned to work, or, "shapes", one day of the calendar week during which the holiday falls.

DEFINITION OF GROUPS:

GROUP 1:
Winch trailer driver

GROUP 2:

Drivers of all Euclid-type vehicles: Euclid, International Harvester, Wabco, Caterpillar, Koehring, tractor and wagon; dumpster; bottom, rear and side dump; carry-all and scraper (not self-loading, loading over the top); water sprinkler trailer; water pull and similar types of vehicle; driver of tractor and trailer-type vehicles: flat, float, I-beam, low bed, water sprinkler, bituminous, transit mix, road oil, fuel, bottom dump hopper, rear dump, office, shanty, epoxy, asphalt, agitator mixer, mulching, stringing, seeding, fertilizing, pole, spread bituminous distributor, water pull (entire unit), tractor trailer, reel trailer and similar types of vehicle

GROUP 3:
Driver on straight three-axle materials: truck and float

GROUP 4:

Truck driver; driver of the following types of vehicles: dump, flat, float, pick-up, container hauler, fuel, water sprinkler, road oil, stringer bead, hot pass, bus, dumpcrete, transit mixer, agitator mixer, half track, winch truck, side-o-matic, dynamite, powder, x-ray, welding, skid, jeep, station wagon, A-frame, dual purpose truck, truck with mechanical tailgate, asphalt distributor, batch truck, seeding, mulching, fertilizing, air compressor truck (in transit); parts chaser; escort; scissor; hi-lift; telescope; concrete breaker; gin pole; stone, sand, asphalt distributor and spreader; nipper; fuel truck (driver of fuel truck including handling of hose and nozzle - entire unit); team driver; vacuum or vac-all truck (entire unit); skid truck (debris container - entire unit); concrete mobile truck (entire unit); beltcrete truck; pumpcrete truck; line truck; reel truck; wrecker or tow truck; utility truck; tack truck; lift truuk; cardex person; drivers on the following types of vehicle: Broyhill coal tar epoxy truck, Littleford bituminous distributor, slurry seal truck or vehicle, thiokol track master pick-up (swamp cat pick-up), bucket loader, dump truck and any rubber-tired tractor used in pulling and towing farm wagons and trailers of any description; on-site repair shop

---

TEAM0560-001 11/01/2012

BERGEN, HUDSON AND PASSAIC COUNTIES:

	Rates	Fringes
Truck drivers:		
Group 1	$ 32.10	28.78
Group 2	$ 32.15	28.78
Group 3	$ 32.25	28.78
Group 4	$ 32.35	28.78

Hazardous waste removal work:

Work on a state or federally designated hazardous waste site, where the worker is in direct contact with hazardous material, and when personal protective equipment is required for respiratory, skin and eye protection: $3.00 per hour additional.

Work on a state or federally designated hazardous waste site, in a zone requiring Level A personal protection for any workers other than the truck driver: $3.00 per hour additional.

Work on a state or federally designated hazardous waste site, in a zone requiring Level B, C or D personal protection for any workers other than the truck driver: $1.00 per hour additional.

PAID HOLIDAYS:
New Year's Day, President's Day, Decoration Day, Independence Day, Labor Day, Presidential Election Day, Veteran's Day, Thanksgiving Day and Christmas Day; provided that the employee has been assigned to work, or, "shapes", one day of the calendar week during which the holiday occurs.

DEFINITION OF GROUPS:

GROUP 1:
Driver of the following types of vehicle: dump; flat; float; pick-up; container hauler; fuel; water sprinkler; road oil; stringer bead; hot pass; bus; dumpcrete; transit mixer; agitator mixer; half track; winch truck; side-o-matic; dynamite; powder; x-ray; welding; skid; jeep; station wagon; stringer; A-frame; dual-purpose truck; truck with mechanical tailgate; asphalt distributor; batch truck; seeding; mulching; fertilizing; air compressor truck (in transit); parts chaser; escort; scissor; hi-lift; telescope; concrete breaker; gin pole; stone, sand, asphalt distributor and spreader; nipper; fuel truck (driver of fuel truck including handling of hose and nozzle - entire unit); team driver; vacuum or vac-all trucks (entire unit); skid truck (debris container - entire unit); concrete

mobile truck (entire unit); beltcrete truck; pumpcrete truck; line truck; reel truck; wrecker; tow truck; utility truck; tack truck; cardex person; driver on the following types of vehicle: Broyhill coal tar epoxy truck, Littleford bituminous distributor, slurry seal truck or vehicle, thiokol track master pick-up (swamp cat pick-up); bucket loader dump truck and any rubber-tired tractor used in pulling and towing farm wagons and trailers of any description; on-site repair shop

GROUP 2:
Driver of 3-axle materials truck and float

GROUP 3:
Driver of all Euclid-type vehicles: Euclid; International Harvester; Wabco; Caterpillar; Koehring, tractor and wagon; dumpster; dump; bottom, rear and side dump; carry-all and scraper (not self-loading, loading over the top); water sprinkler trailer; water pull and similar types of vehicle; driver of tractor and trailer-type vehicle: flat, float, I-beam, low bed, water sprinkler, bituminous, transit mix, road oil, fuel, bottom dump hopper, rear dump, office, shanty, epoxy, asphalt, agitator mixer, mulching, stringing, seeding, fertilizing, pole, spread bituminous distributor, water pull (entire unit), tractor trailer, reel trailer, and similar types of vehicle

GROUP 4:
Winch trailer driver

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the

Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

END OF GENERAL DECISION