

TABLE OF CONTENTS OF SPECIAL PROVISIONS

Note: This Table of Contents has been prepared for the convenience of those using this contract with the sole express purpose of locating quickly the information contained herein; and no claims shall arise due to omissions, additions, deletions, etc., as this Table of Contents shall not be considered part of the contract.

State Project Number: 117-161

BRANCHVILLE TOD PEDESTRIAN IMPROVEMENTS

Town of Ridgefield

The State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 818, 2020 as revised by Supplemental Specifications dated July 2020 (otherwise collectively as “ConnDOT Form 818”), is hereby made part of this contract, as modified by the Special Provisions contained herein.

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STATE PROJECT NO. 117-161

Branchville TOD Pedestrian Improvements

Town of Ridgefield, CT

The State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 818, 2020 including Supplemental Specifications dated July 2021, is hereby made part of this contract, as modified by the Special Provisions contained herein. Form 818 is available at the following DOT website link <http://www.ct.gov/dot/cwp/view.asp?a=3609&q=430362>. The current edition of the State of Connecticut Department of Transportation's "Construction Contract Bidding and Award Manual" ("Manual"), is hereby made part of this contract. If the provisions of this Manual conflict with provisions of other Department documents (not including statutes or regulations), the provisions of the Manual will govern. The Manual is available at the following DOT website link <http://www.ct.gov/dot/cwp/view.asp?a=2288&q=259258>. The Special Provisions relate in particular to the Branchville TOD Pedestrian Improvement Project in the Town(s) of Ridgefield.

CONTRACT TIME AND LIQUIDATED DAMAGES

Two Hundred and Eight (208) calendar days will be allowed for completion of the work on this Contract and the liquidated damages charge to apply will be One Thousand and two hundred Dollars (\$1,200) per calendar day.

NOTICE TO CONTRACTOR – REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

The Contractor is hereby advised that Form FHWA-1273 “Required Contract Provisions Federal-Aid Construction Contracts” (contained herein) has been deemed to be applicable to this project and is incorporated and made a part of this project. The Contractor shall insert this form in each subcontract and further require its inclusion in all lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor, lower tier subcontractor, or service provider.

**Construction Contracts - Required Contract Provisions
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1. Federal Highway Administration (FHWA) Form 1273

The Contractor shall comply with the Federal Highway Administration (FHWA), Form 1273 attached at Exhibit A, as revised, which is hereby made part of this contract. The Contractor shall also require its subcontractors to comply with the FHWA – Form 1273 and include the FHWA – Form 1273 as an attachment to all subcontracts and purchase orders.

2. Title VI of the Civil Rights Act of 1964 / Nondiscrimination Requirements

The Contractor shall comply with Title VI of the Civil Rights Act of 1964 as amended (42 U.S.C. 2000 et seq.), all requirements imposed by the regulations of the United States Department of Transportation (49 CFR Part 21) issued in implementation thereof, and the Title VI Contractor Assurances attached hereto at Exhibit B, all of which are hereby made a part of this Contract.

3. Contractor Work Force Utilization (Federal Executive Order 11246) / Equal Employment Opportunity

- (a) The Contractor shall comply with the Contractor Work Force Utilization (Federal Executive Order 11246) / Equal Employment Opportunity requirements attached at Exhibit C and hereby made part of this Contract, whenever a contractor or subcontractor at any tier performs construction work in excess of \$10,000. These goals shall be included in each contract and subcontract. Goal achievement is calculated for each trade using the hours worked under each trade.
- (b) Companies with contracts, agreements or purchase orders valued at \$10,000 or more will develop and implement an Affirmative Action Plan utilizing the ConnDOT Affirmative Action Plan Guideline. This Plan shall be designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex or national origin, and to promote the full realization of equal employment opportunity through a positive continuation program. Plans shall be updated as required by ConnDOT.

4. Requirements of Title 49, Code of Federal Regulations (CFR), Part 26, Participation by DBEs, as may be revised.

Pursuant to 49 CFR 26.13, the following paragraph is part of this Contract and shall be included in each subcontract the Contractor enters into with a subcontractor:

“The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26, Participation by DBEs, in the award and administration of U.S. DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this contract or such other remedy as ConnDOT (recipient) deems appropriate, which may include, but is not limited to: (1) Withholding monthly progress payments, (2) Assessing sanctions, (3) Liquidated damages; and/or, (4) Disqualifying the contractor from future bidding as non-responsible.”

5. Contract Wage Rates

The Contractor shall comply with:

The Federal and State wage rate requirements indicated in Exhibits F and G hereof, as revised, are hereby made part of this Contract. The Federal wage rates (Davis-Bacon Act) applicable to this Contract shall be the Federal wage rates that are current on the US Department of Labor website (<http://www.wdol.gov/dba.aspx>) as may be revised 10 days prior to bid opening. These applicable Federal wage rates will be physically incorporated in the final contract document executed by both parties. The Department will no longer physically include revised Federal wage rates in the bid documents or as part of addenda documents, prior to the bid opening date. During the bid advertisement period, bidders are responsible for obtaining the appropriate Federal wage rates from the US Department of Labor website.

To obtain the latest Federal wage rates go to the US Department of Labor website (link above). Under Davis-Bacon Act, choose “Selecting DBA WDs” and follow the instruction to search the latest wage rates for the State, County and Construction Type. Refer to the Notice to Contractor (NTC) - Federal Wage Determinations (Davis Bacon Act).

If a conflict exists between the Federal and State wage rates, the higher rate shall govern.

Prevailing Wages for Work on State Highways; Annual Adjustments. With respect to contracts for work on state highways and bridges on state highways, the Contractor shall comply with the provisions of Section 31-54 and 31-55a of the Connecticut General Statutes, as revised.

As required by Section 1.05.12 (Payrolls) of the State of Connecticut, Department of Transportation’s Standard Specification for Roads, Bridges and Incidental Construction (FORM 817), as may be revised, every Contractor or subcontractor performing project work on a Federal aid project is required to post the relevant prevailing wage rates as determined by the United States Secretary of Labor. The wage rate determinations shall be posted in prominent and easily accessible places at the work site.

6. Americans with Disabilities Act of 1990, as Amended

This provision applies to those Contractors who are or will be responsible for compliance with the terms of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. 12101 et seq.), (Act), during the term of the Contract. The Contractor represents that it is familiar with the terms of this Act and that it is in compliance with the Act. Failure of the Contractor to satisfy this standard as the same applies to performance under this Contract, either now or during the term of the Contract as it may be amended, will render the Contract voidable at the option of the State upon notice to the contractor. The Contractor warrants that it will hold the State harmless and indemnify the State from any liability which may be imposed upon the State as a result of any failure of the Contractor to be in compliance with this Act, as the same applies to performance under this Contract.

7. Connecticut Statutory Labor Requirements

(a) Construction, Alteration or Repair of Public Works Projects; Wage Rates. The Contractor shall comply with Section 31-53 of the Connecticut General Statutes, as revised. The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or

worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of section 31-53 of the Connecticut General Statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day.

(b) Debarment List. Limitation on Awarding Contracts. The Contractor shall comply with Section 31-53a of the Connecticut General Statutes, as revised.

(c) Construction Safety and Health Course. The Contractor shall comply with section 31-53b of the Connecticut General Statutes, as revised. The contractor shall furnish proof to the Labor Commissioner with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 of the Connecticut General Statutes, as revised, on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

Any employee required to complete a construction safety and health course as required that has not completed the course, shall have a maximum of fourteen (14) days to complete the course. If the employee has not been brought into compliance, they shall be removed from the project until such time as they have completed the required training.

Any costs associated with this notice shall be included in the general cost of the contract. In addition, there shall be no time granted to the contractor for compliance with this notice. The contractor's compliance with this notice and any associated regulations shall not be grounds for claims as outlined in Section 1.11 – "Claims".

(d) Awarding of Contracts to Occupational Safety and Health Law Violators Prohibited. The Contract is subject to Section 31-57b of the Connecticut General Statutes, as revised.

(e) Residents Preference in Work on Other Public Facilities. NOT APPLICABLE TO FEDERAL AID CONTRACTS. Pursuant to Section 31-52a of the Connecticut General Statutes, as revised, in the employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to residents of the state who are, and continuously for at least six months prior to the date hereof have been, residents of this state, and if no such person is available, then to residents of other states

8. Tax Liability - Contractor's Exempt Purchase Certificate (CERT – 141)

The Contractor shall comply with Chapter 219 of the Connecticut General Statutes pertaining to tangible personal property or services rendered that is/are subject to sales tax. The Contractor is

responsible for determining its tax liability. If the Contractor purchases materials or supplies pursuant to the Connecticut Department of Revenue Services' "Contractor's Exempt Purchase Certificate (CERT-141)," as may be revised, the Contractor acknowledges and agrees that title to such materials and supplies installed or placed in the project will vest in the State simultaneously with passage of title from the retailers or vendors thereof, and the Contractor will have no property rights in the materials and supplies purchased.

Forms and instructions are available anytime by:

Internet: Visit the DRS website at www.ct.gov/DRS to download and print Connecticut tax forms; or
Telephone: Call 1-800-382-9463 (Connecticut calls outside the Greater Hartford calling area only) and select Option 2 or call 860-297-4753 (from anywhere).

9. Executive Orders

This contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the contract as if they had been fully set forth in it. The contract may also be subject to Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services and to Executive Order No. 49 of Governor Dannel P. Malloy, promulgated May 22, 2015, mandating disclosure of certain gifts to public employees and contributions to certain candidates for office. If Executive Order No. 14 and/or Executive Order No. 49 are applicable, they are deemed to be incorporated into and are made a part of the contract as if they had been fully set forth in it. At the Contractor's request, the Department shall provide a copy of these orders to the Contractor.

10. Non Discrimination Requirement (pursuant to section 4a-60 and 4a-60a of the Connecticut General Statutes, as revised): References to "minority business enterprises" in this Section are not applicable to Federal-aid projects/contracts. Federal-aid projects/contracts are instead subject to the Federal Disadvantaged Business Enterprise Program.

(a) For purposes of this Section, the following terms are defined as follows:

- (1) "Commission" means the Commission on Human Rights and Opportunities;
- (2) "Contract" and "contract" include any extension or modification of the Contract or contract;
- (3) "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor;
- (4) "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose.
- (5) "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations;
- (6) "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted

efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements;

- (7) "marital status" means being single, married as recognized by the state of Connecticut, widowed, separated or divorced;
- (8) "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders;
- (9) "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and
- (10) "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms "Contract" and "contract" do not include a contract where each contractor is (1) a political subdivision of the State of Connecticut, including, but not limited to municipalities, unless the contract is a municipal public works contract or quasi-public agency project contract, (2) any other state of the United States, including but not limited to, the District of Columbia, Puerto Rico, U.S. territories and possessions, and federally recognized Indian tribal governments, as defined in Connecticut General Statutes § 1-267, (3) the federal government, (4) a foreign government, or (5) an agency of a subdivision, state or government described in subdivision (1), (2), (3), or (4) of this subsection.

- (b) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut; and the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers' representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor

agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

- (c) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.
- (d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.
- (e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes §46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.
- (f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.
- (g) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and (4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.
- (h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by

regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

Please be aware the Nondiscrimination Certifications can be found at the Office of Policy and Management website:

<https://portal.ct.gov/OPM/Fin-PSA/Forms/Nondiscrimination-Certification>

11. Whistleblower Provision

The following clause is applicable if the Contract has a value of Five Million Dollars (\$5,000,000) or more.

Whistleblowing. This Contract may be subject to the provisions of Section 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee's disclosure of information to any employee of the contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this Contract. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day's continuance of the violation shall be deemed to be a separate and distinct offense. The State may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state contractors in a conspicuous place which is readily available for viewing by the employees of the Contractor.

12. Connecticut Freedom of Information Act

- (a) **Disclosure of Records.** This Contract may be subject to the provisions of section 1-218 of the Connecticut General Statutes. In accordance with this statute, each contract in excess of two million five hundred thousand dollars between a public agency and a person for the performance of a governmental function shall (a) provide that the public agency is entitled to receive a copy of records and files related to the performance of the governmental function, and (b) indicate that such records and files are subject to FOIA and may be disclosed by the public agency pursuant to FOIA. No request to inspect or copy such records or files shall be valid unless the request is made to the public agency in accordance with FOIA. Any complaint by a person who is denied the right to inspect or copy such records or files shall be brought to the Freedom of Information Commission in accordance with the provisions of sections 1-205 and 1-206 of the Connecticut General Statutes.
- (b) **Confidential Information.** The State will afford due regard to the Contractor's request for the protection of proprietary or confidential information which the State receives from the Contractor. However, all materials associated with the Contract are subject to the terms of the FOIA and all corresponding rules, regulations and interpretations. In making such a request, the Contractor may not merely state generally that the materials are proprietary or confidential in nature and not, therefore, subject to release to third parties. Those particular

sentences, paragraphs, pages or sections that the Contractor believes are exempt from disclosure under the FOIA must be specifically identified as such. Convincing explanation and rationale sufficient to justify each exemption consistent with the FOIA must accompany the request. The rationale and explanation must be stated in terms of the prospective harm to the competitive position of the Contractor that would result if the identified material were to be released and the reasons why the materials are legally exempt from release pursuant to the FOIA. To the extent that any other provision or part of the Contract conflicts or is in any way inconsistent with this section, this section controls and shall apply and the conflicting provision or part shall not be given effect. If the Contractor indicates that certain documentation is submitted in confidence, by specifically and clearly marking the documentation as “CONFIDENTIAL,” DOT will first review the Contractor’s claim for consistency with the FOIA (that is, review that the documentation is actually a trade secret or commercial or financial information and not required by statute), and if determined to be consistent, will endeavor to keep such information confidential to the extent permitted by law. See, *e.g.*, Conn. Gen. Stat. §1-210(b)(5)(A-B). The State, however, has no obligation to initiate, prosecute or defend any legal proceeding or to seek a protective order or other similar relief to prevent disclosure of any information that is sought pursuant to a FOIA request. Should the State withhold such documentation from a Freedom of Information requester and a complaint be brought to the Freedom of Information Commission, the Contractor shall have the burden of cooperating with DOT in defense of that action and in terms of establishing the availability of any FOIA exemption in any proceeding where it is an issue. In no event shall the State have any liability for the disclosure of any documents or information in its possession which the State believes are required to be disclosed pursuant to the FOIA or other law.

13. Service of Process

The Contractor, if not a resident of the State of Connecticut, or, in the case of a partnership, the partners, if not residents, hereby appoints the Secretary of State of the State of Connecticut, and his successors in office, as agent for service of process for any action arising out of or as a result of this Contract; such appointment to be in effect throughout the life of this Contract and six (6) years thereafter.

14. Substitution of Securities for Retainages on State Contracts and Subcontracts

This Contract is subject to the provisions of Section 3-112a of the General Statutes of the State of Connecticut, as revised.

15. Health Insurance Portability and Accountability Act of 1996 (HIPAA)

The Contractor shall comply, if applicable, with the Health Insurance Portability and Accountability Act of 1996 and, pursuant thereto, the provisions attached at Exhibit D, and hereby made part of this Contract.

16. Forum and Choice of Law

Forum and Choice of Law. The parties deem the Contract to have been made in the City of Hartford, State of Connecticut. Both parties agree that it is fair and reasonable for the validity and construction of the Contract to be, and it shall be, governed by the laws and court decisions of the State of

Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by Federal law or the laws of the State of Connecticut do not bar an action against the State, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Contractor waives any objection which it may now have or will have to the laying of venue of any Claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

17. Summary of State Ethics Laws

Pursuant to the requirements of section 1-101qq of the Connecticut General Statutes, the summary of State ethics laws developed by the State Ethics Commission pursuant to section 1-81b of the Connecticut General Statutes is incorporated by reference into and made a part of the Contract as if the summary had been fully set forth in the Contract.

18. Audit and Inspection of Plants, Places of Business and Records

- (a) The State and its agents, including, but not limited to, the Connecticut Auditors of Public Accounts, Attorney General and State's Attorney and their respective agents, may, at reasonable hours, inspect and examine all of the parts of the Contractor's and Contractor Parties' plants and places of business which, in any way, are related to, or involved in, the performance of this Contract. For the purposes of this Section, "Contractor Parties" means the Contractor's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, servants, consultants, employees or any one of them or any other person or entity with whom the Contractor is in privity of oral or written contract and the Contractor intends for such other person or entity to Perform under the Contract in any capacity.
- (b) The Contractor shall maintain, and shall require each of the Contractor Parties to maintain, accurate and complete Records. The Contractor shall make all of its and the Contractor Parties' Records available at all reasonable hours for audit and inspection by the State and its agents.
- (c) The State shall make all requests for any audit or inspection in writing and shall provide the Contractor with at least twenty-four (24) hours' notice prior to the requested audit and inspection date. If the State suspects fraud or other abuse, or in the event of an emergency, the State is not obligated to provide any prior notice.
- (d) The Contractor shall keep and preserve or cause to be kept and preserved all of its and Contractor Parties' Records until three (3) years after the latter of (i) final payment under this Agreement, or (ii) the expiration or earlier termination of this Agreement, as the same may be modified for any reason. The State may request an audit or inspection at any time during this period. If any Claim or audit is started before the expiration of this period, the Contractor shall retain or cause to be retained all Records until all Claims or audit findings have been resolved.
- (e) The Contractor shall cooperate fully with the State and its agents in connection with an audit or inspection. Following any audit or inspection, the State may conduct and the Contractor shall cooperate with an exit conference.
- (f) The Contractor shall incorporate this entire Section verbatim into any contract or other agreement that it enters into with any Contractor Party.

19. Campaign Contribution Restriction

For all State contracts, defined in Conn. Gen. Stat. §9-612(f)(1) as having a value in a calendar year of \$50,000 or more, or a combination or series of such agreements or contracts having a value of \$100,000 or more, the authorized signatory to this contract expressly acknowledges receipt of the State

Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice, as set forth in "Notice to Executive Branch State Contractors and Prospective State Contractors of Campaign Contribution and Solicitation Limitations," a copy of which is attached hereto and hereby made a part of this contract, attached as Exhibit E.

20. Tangible Personal Property

- (a) The Contractor on its behalf and on behalf of its Affiliates, as defined below, shall comply with the provisions of Conn. Gen. Stat. §12-411b, as follows:
- (1) For the term of the Contract, the Contractor and its Affiliates shall collect and remit to the State of Connecticut, Department of Revenue Services, any Connecticut use tax due under the provisions of Chapter 219 of the Connecticut General Statutes for items of tangible personal property sold by the Contractor or by any of its Affiliates in the same manner as if the Contractor and such Affiliates were engaged in the business of selling tangible personal property for use in Connecticut and had sufficient nexus under the provisions of Chapter 219 to be required to collect Connecticut use tax;
 - (2) A customer's payment of a use tax to the Contractor or its Affiliates relieves the customer of liability for the use tax;
 - (3) The Contractor and its Affiliates shall remit all use taxes they collect from customers on or before the due date specified in the Contract, which may not be later than the last day of the month next succeeding the end of a calendar quarter or other tax collection period during which the tax was collected;
 - (4) The Contractor and its Affiliates are not liable for use tax billed by them but not paid to them by a customer; and
 - (5) Any Contractor or Affiliate who fails to remit use taxes collected on behalf of its customers by the due date specified in the Contract shall be subject to the interest and penalties provided for persons required to collect sales tax under chapter 219 of the general statutes.
- (b) For purposes of this section of the Contract, the word "Affiliate" means any person, as defined in section 12-1 of the general statutes, that controls, is controlled by, or is under common control with another person. A person controls another person if the person owns, directly or indirectly, more than ten per cent of the voting securities of the other person. The word "voting security" means a security that confers upon the holder the right to vote for the election of members of the board of directors or similar governing body of the business, or that is convertible into, or entitles the holder to receive, upon its exercise, a security that confers such a right to vote. "Voting security" includes a general partnership interest.
- (c) The Contractor represents and warrants that each of its Affiliates has vested in the Contractor plenary authority to so bind the Affiliates in any agreement with the State of Connecticut. The Contractor on its own behalf and on behalf of its Affiliates shall also provide, no later than 30 days after receiving a request by the State's contracting authority, such information as the State may require to ensure, in the State's sole determination, compliance with the provisions of Chapter 219 of the Connecticut General Statutes, including, but not limited to, §12-411b.

21. Bid Rigging and/or Fraud – Notice to Contractor

The Connecticut Department of Transportation is cooperating with the U.S. Department of Transportation and the Justice Department in their investigation into highway construction contract bid rigging and/or fraud.

A toll-free "HOT LINE" telephone number 800-424-9071 has been established to receive information from contractors, subcontractors, manufacturers, suppliers or anyone with knowledge of bid rigging and/or fraud, either past or current. The "HOT LINE" telephone number will be available during

normal working hours (8:00 am – 5:00 pm EST). Information will be treated confidentially and anonymity respected.

22. Consulting Agreement Affidavit

The Contractor shall comply with Connecticut General Statutes Section 4a-81(a) and 4a-81(b), as revised. Pursuant to Public Act 11-229, after the initial submission of the form, if there is a change in the information contained in the form, a contractor shall submit the updated form, as applicable, either (i) not later than thirty (30) days after the effective date of such change or (ii) prior to execution of any new contract, whichever is earlier.

The Affidavit/Form may be submitted in written format or electronic format through the Department of Administrative Services (DAS) website.

23. Cargo Preference Act Requirements (46 CFR 381.7(a)-(b)) – Use of United States Flag Vessels

The Contractor agrees to comply with the following:

(a) Agreement Clauses.

- (1) Pursuant to Pub. L. 664 ([43 U.S.C. 1241\(b\)](#)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.
- (2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(b) Contractor and Subcontractor Clauses. The contractor agrees—

- (1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- (2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- (3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

EXHIBIT A

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

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

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

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

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

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

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

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

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

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

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

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

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

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

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

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

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

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

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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

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

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

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

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

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

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26, and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26, in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

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

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

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

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

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for

employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

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

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

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

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

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same

prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

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

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise

employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

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

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

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

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be

performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

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

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

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

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

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

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

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

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

Shall be fined under this title or imprisoned not more than 5 years or both."

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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

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

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

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

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

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

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

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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

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

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

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and

1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

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

* * * * *

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

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

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

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

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

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

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

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

EXHIBIT B

**TITLE VI CONTRACTOR ASSURANCES
APPENDIX A**

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Regulations relative to Nondiscrimination in Federally-assisted programs of the United States Department of Transportation Federal Highway Administration and Federal Transit Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin, sex, age, disability, income or Limited English Proficiency in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration or Federal Transit Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor will so certify to the Recipient or the Federal Highway Administration or the Federal Transit Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Non-compliance:** In the event of the contractor's non-compliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration or the Federal Transit Administration may determine to be appropriate, including, but not limited to:

- a. withholding contract payments to the contractor under the contract until the contractor complies; and/or
- b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration or the Federal Transit Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with, litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

TITLE VI CONTRACTOR ASSURANCES APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. § 2000d et seq.), (prohibits discrimination on the basis of race, color, national origin), as implemented by 49 C.F.R. § 21.1 et seq. and 49 C.F.R. part 303;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973 (23 U.S.C. § 324 et seq.) (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794 et seq.) (prohibits discrimination on the basis of disability); and 49 C.F.R. part 27;
- The Age Discrimination Act of 1975, as amended (42 U.S.C. § 6101 et seq.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (Pub. L. 97-248 (1982)), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (102 Stat. 28) ("*... which restore[d] the broad scope of coverage and to clarify the application of Title IX of the Education Amendments of 1972, section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and Title VI of the Civil Rights Act of 1964.*");
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 --12189), as implemented by Department of Justice regulations at 28 C.F.R. parts 35 and 36, and Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. § 1681 et seq).

EXHIBIT C

CONTRACTOR WORKFORCE UTILIZATION (FEDERAL EXECUTIVE ORDER 11246) / EQUAL EMPLOYMENT OPPORTUNITY (Federal - FHWA)

1. Project Workforce Utilization Goals:

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted or funded) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where the work is actually performed.

Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications which contain the applicable goals for minority and female participation.

The goals for minority and female utilization are expressed in percentage terms for the contractor's aggregate work-force in each trade on all construction work in the covered area, are referenced in the attached Appendix A.

2. Executive Order 11246

The Contractor's compliance with Executive Order 11246 and 41-CFR Part 60-4 shall be based on its implementation of the specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(A) and its efforts to meet the goals established for the geographical area where the contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hour performed.

If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan.

Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Pan does not excuse any covered Contractor's of subcontractor's failure to take good faith efforts to achieve the plan goals and timetables.

The Contractor shall implement the specific affirmative action standards provided in a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs (OFCCP) Office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractors obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant hereto.

In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites; and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community

organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off the street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason thereafter; along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the Union or Unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or women sent by the Contractor, or when the Contractor has other information that the Union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO Policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company EEO Policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment, decisions including specific Foreman, etc. prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO Policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor

shall send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work-force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- p. Conduct a review at least annually of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (a through p). The efforts of a contractor association, joint contractor union, contractor community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, makes a good faith effort to meet with individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of Executive Order 11246 if a particular group is employed in a substantially disparate manner, (for example, even though the

Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under utilized).

The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g. mechanic, apprentice, trainee, helper, or laborer) dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

Nothing herein provided shall be construed as a limitation upon the application of their laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

The Director of the Office of Federal Contract Compliance Programs, from time to time, shall issue goals and timetables for minority and female utilization which shall be based on appropriate work-force, demographic or other relevant data and which shall cover construction projects or construction contracts performed in specific geographical areas. The goals, which shall be applicable to each construction trade in a covered contractor's or timetables, shall be published as notices in the Federal Register, and shall be inserted by the Contracting officers and applicants, as applicable, in the Notice required by 41 CFR 60-4.2.

FEDERALLY FUNDED OR ASSISTED PROJECTS
APPENDIX A
(Labor Market Goals)

Standard Metropolitan Statistical Area (SMSA)

Female

Minority

Bridgeport – Stamford – Norwalk – Danbury	10.2%
6.9%	

Bethel	Bridgeport	Brookfield	Danbury
Darien	Derby	Easton	Fairfield
Greenwich	Milford	Monroe	New Canaan
New Fairfield	Newton	Norwalk	Redding
Shelton	Stamford	Stratford	Trumbull
Weston	Westport	Wilton	

Hartford – Bristol – New Britain	6.9%
6.9%	

Andover	Avon	Berlin	Bloomfield
Bolton	Bristol	Burlington	Canton
Colchester	Columbia	Coventry	Cromwell
East Granby	East Hampton	East Hartford	East Windsor
Ellington	Enfield	Farmington	Glastonbury
Granby	Hartford	Hebron	Manchester
Marlborough	New Britain	New Hartford	Newington
Plainville	Plymouth	Portland	Rocky Hill
Simsbury	South Windsor	Southington	Stafford
Suffield	Tolland	Vernon	West Hartford
Wethersfield	Willington	Windsor	Windsor Locks

New Haven – Waterbury – Meriden	9.0%
6.9%	

Beacon Falls	Bethany	Branford	Cheshire
Clinton	East Haven	Guilford	Hamden
Madison	Meriden	Middlebury	Naugatuck
New Haven	North Branford	North Haven	Orange
Prospect	Southbury	Thomaston	Wallingford
Waterbury	Watertown	West Haven	Wolcott
Woodbridge	Woodbury		

New London – Norwich	4.5%
6.9%	

Bozrah	East Lyme	Griswold	Groton
Ledyard	Lisbon	Montville	New London

Norwich Sprague	Old Lyme Stonington	Old Saybrook Waterford	Preston
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Non SMSA**Female****Minority****Litchfield – Windham****5.9%****6.9%**

Abington	Ashford	Ballouville	Bantam
Barkhamsted	Bethlehem	Bridgewater	Brooklyn
Canaan	Canterbury	Central Village	Cahplin
Colebrook	Cornwall	Cornwall Bridge	Danielson
Dayville	East Canaan	East Killingly	East Woodstock
Eastford	Falls Village	Gaylordsville	Goshen
Grosvenor Dale	Hampton	Harwinton	Kent
Killigly	Lakeside	Litchfield	Moosup
Morris	New Milford	New Preston	New Preston Marble Dale
Norfolk	North Canaan	No. Grosvenordale	North Windham
Oneco	Pequabuck	Pine Meadow	Plainfield
Pleasant Valley	Pomfret	Pomfret Center	Putnam
Quinebaug	Riverton	Rogers	Roxbury
Salisbury	Scotland	Sharon	South Kent
South Woodstock	Sterling	Taconic	Terryville
Thompson	Torrington	Warren	Warrenville
Washington	Washington Depot	Wauregan	West Cornwall
Willimantic	Winchester	Winchester Center	Windham
Winsted	Woodstock	Woodstock Valley	

EXHIBIT D

Health Insurance Portability and Accountability Act of 1996 (“HIPAA”).

- (a) If the Contactor is a Business Associate under the requirements of the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), the Contractor must comply with all terms and conditions of this Section of the Contract. If the Contractor is not a Business Associate under HIPAA, this Section of the Contract does not apply to the Contractor for this Contract.
- (b) The Contractor is required to safeguard the use, publication and disclosure of information on all applicants for, and all clients who receive, services under the Contract in accordance with all applicable federal and state law regarding confidentiality, which includes but is not limited to HIPAA, more specifically with the Privacy and Security Rules at 45 C.F.R. Part 160 and Part 164, subparts A, C, and E; and
- (c) The State of Connecticut Agency named on page 1 of this Contract (hereinafter the “Department”) is a “covered entity” as that term is defined in 45 C.F.R. § 160.103; and
- (d) The Contractor, on behalf of the Department, performs functions that involve the use or disclosure of “individually identifiable health information,” as that term is defined in 45 C.F.R. § 160.103; and
- (e) The Contractor is a “business associate” of the Department, as that term is defined in 45 C.F.R. § 160.103; and
- (f) The Contractor and the Department agree to the following in order to secure compliance with the HIPAA, the requirements of Subtitle D of the Health Information Technology for Economic and Clinical Health Act (hereinafter the HITECH Act), (Pub. L. 111-5, sections 13400 to 13423), and more specifically with the Privacy and Security Rules at 45 C.F.R. Part 160 and Part 164, subparts A, C, and E.
- (g) Definitions
 - (1) “Breach shall have the same meaning as the term is defined in section 13400 of the HITECH Act (42 U.S.C. §17921(1))
 - (2) “Business Associate” shall mean the Contractor.
 - (3) “Covered Entity” shall mean the Department of the State of Connecticut named on page 1 of this Contract.
 - (4) “Designated Record Set” shall have the same meaning as the term “designated record set” in 45 C.F.R. § 164.501.
 - (5) “Electronic Health Record” shall have the same meaning as the term is defined in section 13400 of the HITECH Act (42 U.S.C. §17921(5))

- (6) "Individual" shall have the same meaning as the term "individual" in 45 C.F.R. § 160.103 and shall include a person who qualifies as a personal representative as defined in 45 C.F.R. § 164.502(g).
 - (7) "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 C.F.R. part 160 and parts 164, subparts A and E.
 - (8) "Protected Health Information" or "PHI" shall have the same meaning as the term "protected health information" in 45 C.F.R. § 160.103, limited to information created or received by the Business Associate from or on behalf of the Covered Entity.
 - (9) "Required by Law" shall have the same meaning as the term "required by law" in 45 C.F.R. § 164.103.
 - (10) "Secretary" shall mean the Secretary of the Department of Health and Human Services or his designee.
 - (11) "More stringent" shall have the same meaning as the term "more stringent" in 45 C.F.R. § 160.202.
 - (12) "This Section of the Contract" refers to the HIPAA Provisions stated herein, in their entirety.
 - (13) "Security Incident" shall have the same meaning as the term "security incident" in 45 C.F.R. § 164.304.
 - (14) "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information at 45 C.F.R. part 160 and parts 164, subpart A and C.
 - (15) "Unsecured protected health information" shall have the same meaning as the term as defined in section 13402(h)(1)(A) of HITECH. Act. (42 U.S.C. §17932(h)(1)(A)).
- (h) Obligations and Activities of Business Associates.
- (1) Business Associate agrees not to use or disclose PHI other than as permitted or required by this Section of the Contract or as Required by Law.
 - (2) Business Associate agrees to use appropriate safeguards to prevent use or disclosure of PHI other than as provided for in this Section of the Contract.
 - (3) Business Associate agrees to use administrative, physical and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of electronic protected health information that it creates, receives, maintains, or transmits on behalf of the Covered Entity.

- (4) Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to the Business Associate of a use or disclosure of PHI by Business Associate in violation of this Section of the Contract.
- (5) Business Associate agrees to report to Covered Entity any use or disclosure of PHI not provided for by this Section of the Contract or any security incident of which it becomes aware.
- (6) Business Associate agrees to insure that any agent, including a subcontractor, to whom it provides PHI received from, or created or received by Business Associate, on behalf of the Covered Entity, agrees to the same restrictions and conditions that apply through this Section of the Contract to Business Associate with respect to such information.
- (7) Business Associate agrees to provide access, at the request of the Covered Entity, and in the time and manner agreed to by the parties, to PHI in a Designated Record Set, to Covered Entity or, as directed by Covered Entity, to an Individual in order to meet the requirements under 45 C.F.R. § 164.524.
- (8) Business Associate agrees to make any amendments to PHI in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 C.F.R. § 164.526 at the request of the Covered Entity, and in the time and manner agreed to by the parties.
- (9) Business Associate agrees to make internal practices, books, and records, including policies and procedures and PHI, relating to the use and disclosure of PHI received from, or created or received by, Business Associate on behalf of Covered Entity, available to Covered Entity or to the Secretary in a time and manner agreed to by the parties or designated by the Secretary, for purposes of the Secretary determining Covered Entity's compliance with the Privacy Rule.
- (10) Business Associate agrees to document such disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI in accordance with 45 C.F.R. § 164.528 and section 13405 of the HITECH Act (42 U.S.C. § 17935) and any regulations promulgated thereunder.
- (11) Business Associate agrees to provide to Covered Entity, in a time and manner agreed to by the parties, information collected in accordance with clause h. (10) of this Section of the Contract, to permit Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI in accordance with 45 C.F.R. § 164.528 and section 13405 of the HITECH Act (42 U.S.C. § 17935) and any regulations promulgated thereunder. Business Associate agrees at the Covered Entity's direction to provide an accounting of disclosures of PHI directly to an individual in accordance with 45 C.F.R. § 164.528 and section 13405 of the HITECH Act (42 U.S.C. § 17935) and any regulations promulgated thereunder.
- (12) Business Associate agrees to comply with any state or federal law that is more stringent than the Privacy Rule.

- (13) Business Associate agrees to comply with the requirements of the HITECH Act relating to privacy and security that are applicable to the Covered Entity and with the requirements of 45 C.F.R. sections 164.504(e), 164.308, 164.310, 164.312, and 164.316.
- (14) In the event that an individual requests that the Business Associate (a) restrict disclosures of PHI; (b) provide an accounting of disclosures of the individual's PHI; or (c) provide a copy of the individual's PHI in an electronic health record, the Business Associate agrees to notify the covered entity, in writing, within two business days of the request.
- (15) Business Associate agrees that it shall not, directly or indirectly, receive any remuneration in exchange for PHI of an individual without (1) the written approval of the covered entity, unless receipt of remuneration in exchange for PHI is expressly authorized by this Contract and (2) the valid authorization of the individual, except for the purposes provided under section 13405(d)(2) of the HITECH Act,(42 U.S.C. § 17935(d)(2)) and in any accompanying regulations
- (16) Obligations in the Event of a Breach
- A. The Business Associate agrees that, following the discovery of a breach of unsecured protected health information, it shall notify the Covered Entity of such breach in accordance with the requirements of section 13402 of HITECH (42 U.S.C. 17932(b) and the provisions of this Section of the Contract.
- B. Such notification shall be provided by the Business Associate to the Covered Entity without unreasonable delay, and in no case later than 30 days after the breach is discovered by the Business Associate, except as otherwise instructed in writing by a law enforcement official pursuant to section 13402 (g) of HITECH (42 U.S.C. 17932(g)) . A breach is considered discovered as of the first day on which it is, or reasonably should have been, known to the Business Associate. The notification shall include the identification and last known address, phone number and email address of each individual (or the next of kin of the individual if the individual is deceased) whose unsecured protected health information has been, or is reasonably believed by the Business Associate to have been, accessed, acquired, or disclosed during such breach.
- C. The Business Associate agrees to include in the notification to the Covered Entity at least the following information:
1. A brief description of what happened, including the date of the breach and the date of the discovery of the breach, if known.
 2. A description of the types of unsecured protected health information that were involved in the breach (such as full name, Social Security number, date of birth, home address, account number, or disability code).
 3. The steps the Business Associate recommends that individuals take to protect themselves from potential harm resulting from the breach.

4. A detailed description of what the Business Associate is doing to investigate the breach, to mitigate losses, and to protect against any further breaches.
 5. Whether a law enforcement official has advised either verbally or in writing the Business Associate that he or she has determined that notification or notice to individuals or the posting required under section 13402 of the HITECH Act would impede a criminal investigation or cause damage to national security and; if so, include contact information for said official.
- D. Business Associate agrees to provide appropriate staffing and have established procedures to ensure that individuals informed by the Covered Entity of a breach by the Business Associate have the opportunity to ask questions and contact the Business Associate for additional information regarding the breach. Such procedures shall include a toll-free telephone number, an e-mail address, a posting on its Web site and a postal address. Business Associate agrees to include in the notification of a breach by the Business Associate to the Covered Entity, a written description of the procedures that have been established to meet these requirements. Costs of such contact procedures will be borne by the Contractor.
- E. Business Associate agrees that, in the event of a breach, it has the burden to demonstrate that it has complied with all notifications requirements set forth above, including evidence demonstrating the necessity of a delay in notification to the Covered Entity.
- (i) Permitted Uses and Disclosure by Business Associate.
- (1) General Use and Disclosure Provisions Except as otherwise limited in this Section of the Contract, Business Associate may use or disclose PHI to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in this Contract, provided that such use or disclosure would not violate the Privacy Rule if done by Covered Entity or the minimum necessary policies and procedures of the Covered Entity.
 - (2) Specific Use and Disclosure Provisions
 - (A) Except as otherwise limited in this Section of the Contract, Business Associate may use PHI for the proper management and administration of Business Associate or to carry out the legal responsibilities of Business Associate.
 - (B) Except as otherwise limited in this Section of the Contract, Business Associate may disclose PHI for the proper management and administration of Business Associate, provided that disclosures are Required by Law, or Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will remain confidential and used or further disclosed only as Required by Law or

for the purpose for which it was disclosed to the person, and the person notifies Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached.

(C) Except as otherwise limited in this Section of the Contract, Business Associate may use PHI to provide Data Aggregation services to Covered Entity as permitted by 45 C.F.R. § 164.504(e)(2)(i)(B).

(j) Obligations of Covered Entity.

(1) Covered Entity shall notify Business Associate of any limitations in its notice of privacy practices of Covered Entity, in accordance with 45 C.F.R. § 164.520, or to the extent that such limitation may affect Business Associate's use or disclosure of PHI.

(2) Covered Entity shall notify Business Associate of any changes in, or revocation of, permission by Individual to use or disclose PHI, to the extent that such changes may affect Business Associate's use or disclosure of PHI.

(3) Covered Entity shall notify Business Associate of any restriction to the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 C.F.R. § 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI.

(k) Permissible Requests by Covered Entity. Covered Entity shall not request Business Associate to use or disclose PHI in any manner that would not be permissible under the Privacy Rule if done by the Covered Entity, except that Business Associate may use and disclose PHI for data aggregation, and management and administrative activities of Business Associate, as permitted under this Section of the Contract.

(l) Term and Termination.

(1) Term. The Term of this Section of the Contract shall be effective as of the date the Contract is effective and shall terminate when the information collected in accordance with clause h. (10) of this Section of the Contract is provided to the Covered Entity and all of the PHI provided by Covered Entity to Business Associate, or created or received by Business Associate on behalf of Covered Entity, is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy PHI, protections are extended to such information, in accordance with the termination provisions in this Section.

(2) Termination for Cause Upon Covered Entity's knowledge of a material breach by Business Associate, Covered Entity shall either:

(A) Provide an opportunity for Business Associate to cure the breach or end the violation and terminate the Contract if Business Associate does not cure the breach or end the violation within the time specified by the Covered Entity; or

(B) Immediately terminate the Contract if Business Associate has breached a material term of this Section of the Contract and cure is not possible; or

(C) If neither termination nor cure is feasible, Covered Entity shall report the violation to the Secretary.

(3) Effect of Termination

(A) Except as provided in (1)(2) of this Section of the Contract, upon termination of this Contract, for any reason, Business Associate shall return or destroy all PHI received from Covered Entity, or created or received by Business Associate on behalf of Covered Entity. Business Associate shall also provide the information collected in accordance with clause h. (10) of this Section of the Contract to the Covered Entity within ten business days of the notice of termination. This provision shall apply to PHI that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the PHI.

(B) In the event that Business Associate determines that returning or destroying the PHI is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction infeasible. Upon documentation by Business Associate that return or destruction of PHI is infeasible, Business Associate shall extend the protections of this Section of the Contract to such PHI and limit further uses and disclosures of PHI to those purposes that make return or destruction infeasible, for as long as Business Associate maintains such PHI. Infeasibility of the return or destruction of PHI includes, but is not limited to, requirements under state or federal law that the Business Associate maintains or preserves the PHI or copies thereof.

(m) Miscellaneous Provisions.

(1) Regulatory References. A reference in this Section of the Contract to a section in the Privacy Rule means the section as in effect or as amended.

(2) Amendment. The Parties agree to take such action as is necessary to amend this Section of the Contract from time to time as is necessary for Covered Entity to comply with requirements of the Privacy Rule and the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191.

(3) Survival. The respective rights and obligations of Business Associate shall survive the termination of this Contract.

(4) Effect on Contract. Except as specifically required to implement the purposes of this Section of the Contract, all other terms of the Contract shall remain in force and effect.

(5) Construction. This Section of the Contract shall be construed as broadly as necessary to implement and comply with the Privacy Standard. Any ambiguity in this Section of the Contract shall be resolved in favor of a meaning that complies, and is consistent with, the Privacy Standard.

(6) Disclaimer. Covered Entity makes no warranty or representation that compliance with this Section of the Contract will be adequate or satisfactory for Business Associate's own purposes. Covered Entity shall not be liable to Business Associate for any claim, civil or criminal penalty, loss or damage related to or arising from the unauthorized use or disclosure of PHI by Business Associate or any of its officers, directors, employees, contractors or agents, or any third party to whom Business Associate has disclosed PHI contrary to the provisions of this Contract or applicable law. Business Associate is solely responsible for all decisions made, and actions taken, by Business Associate regarding the safeguarding, use and disclosure of PHI within its possession, custody or control.

(7) Indemnification. The Business Associate shall indemnify and hold the Covered Entity harmless from and against any and all claims, liabilities, judgments, fines, assessments, penalties, awards and any statutory damages that may be imposed or assessed pursuant to HIPAA, as amended or the HITECH Act, including, without limitation, attorney's fees, expert witness fees, costs of investigation, litigation or dispute resolution, and costs awarded thereunder, relating to or arising out of any violation by the Business Associate and its agents, including subcontractors, of any obligation of Business Associate and its agents, including subcontractors, under this section of the contract, under HIPAA, the HITECH Act, the Privacy Rule and the Security Rule.

**Notice to Executive Branch State Contractors and Prospective State
Contractors of Campaign Contribution and Solicitation Limitations**

This notice is provided under the authority of Connecticut General Statutes §9-612 (f) (2) and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined on the reverse side of this page).

CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a *state contract* or *state contract solicitation* with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder, of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes town committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall **knowingly solicit** contributions from the state contractor's or prospective state contractor's employees or from a *subcontractor* or *principals of the subcontractor* on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties—Up to \$2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their violations may also be subject to civil penalties of up to \$2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties—Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than \$5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may result in the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

Additional information may be found on the website of the State Elections Enforcement Commission, www.ct.gov/sec. Click on the link to "Lobbyist/Contractor Limitations."

DEFINITIONS

“State contractor” means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. “State contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person’s capacity as a state or quasi-public agency employee.

“Prospective state contractor” means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100. “Prospective state contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person’s capacity as a state or quasi-public agency employee.

“Principal of a state contractor or prospective state contractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

“State contract” means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. “State contract” does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

“State contract solicitation” means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

“Managerial or discretionary responsibilities with respect to a state contract” means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

“Dependent child” means a child residing in an individual’s household who may legally be claimed as a dependent on the federal income tax of such individual.

“Solicit” means (A) requesting that a contribution be made, (B) participating in any fundraising activities for a candidate committee, exploratory committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee, serving on the committee that is hosting a fundraising event, introducing the candidate or making other public remarks at a fundraising event, being honored or otherwise recognized at a fundraising event, or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

“Subcontractor” means any person, business entity or nonprofit organization that contracts to perform part or all of the obligations of a state contractor’s state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates. “Subcontractor” does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person’s capacity as a state or quasi-public agency employee.

“Principal of a subcontractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age

or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

EXHIBIT F

(Federal wage rate package will be inserted at the end after State wages for the final executed contract only. Refer to NTC – Federal Wage Determinations)

EXHIBIT G

State Wages and Other Related Information

Please refer to the Department of Labor website for the latest updates, annual adjusted wage rate increases, certified payroll forms and applicable statutes.

<http://www.ctdol.state.ct.us/wgwkstnd/prevailwage.htm>

Prevailing Wage Law Poster Language

**THIS IS A PUBLIC WORKS PROJECT Covered by the
PREVAILING WAGE LAW CT General Statutes Section 31-53**

If you have QUESTIONS regarding your wages CALL (860) 263-6790

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE (applicable to public building contracts entered into on or after July 1, 2007, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;

(7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;

(8) Proof of completion may be demonstrated through either: (a) the presentation of a bona fide student course completion card issued by the federal OSHA Training Institute; or (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;

(9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

(10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;

(11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;

(12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;

(13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;

(14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and

(15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.

(16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgmenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice

To All Mason Contractors and Interested Parties Regarding Construction Pursuant to Section 31-53 of the Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute. Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute. The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

**CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION**

**CONTRACTORS WAGE CERTIFICATION FORM
Construction Manager at Risk/General Contractor/Prime Contractor**

I, _____ of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

Signed

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

Notary Public

Return to: Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

Information Bulletin ***Occupational Classifications***

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.

Below are additional clarifications of specific job duties performed for certain classifications:

□ **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

□ **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

□ **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

□ **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

□ **CARPENTERS, MILLWRIGHTS. PILEDRIVERMEN. LATHERS. RESILEINT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular

furniture/furniture systems. Free-standing furniture is not covered. This includes free standing: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

□ **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

□ **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

□ **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the Installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. *License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.

□ **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. *License required by Connecticut General Statutes: R-1, 2, 5, 6.

□ **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

□ **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and

curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

□ **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

□ **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

□ **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

□ **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

□ **LEAD PAINT REMOVAL**

- Painter's Rate 1. Removal of lead paint from bridges. 2. Removal of lead paint as preparation of any surface to be repainted. 3. Where removal is on a Demolition project prior to reconstruction. • Laborer's Rate 1. Removal of lead paint from any surface NOT to be repainted. 2. Where removal is on a TOTAL Demolition project only.

□ **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. *License required per Connecticut General Statutes: P-1,2,6,7,8,9 J1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.

□ **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. ***License required, crane operators only, per Connecticut General Statutes.**

□ **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

□ **SHEETMETAL WORKERS**

Fabricate, assembles, installs and repairs sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air –balancing ancillary to installation and construction.

□ **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems. ***License required per Connecticut General Statutes: F-1, 2, 3, 4.**

□ **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

□ **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are requires to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance

of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ***License required, drivers only, per Connecticut General Statutes.**

For example:

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

Any questions regarding the proper classification should be directed to:

**Public Contract Compliance Unit
Wage and Workplace Standards Division
Connecticut Department of Labor
200 Folly Brook Blvd, Wethersfield, CT 06109
(860) 263-6543.**

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

□ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and (Residential- Hartford, Middlesex, New Haven, New London and
Tolland Counties)

a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.

b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators

(Heavy and Highway Construction & Building Construction)

a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he

fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

Rev. 7/1/19

SEE BELOW FOR STATE WAGE RATES

INSERT STATE WAGES HERE

Minimum Rates and Classifications for Heavy/Highway Construction

ID#: 22-36434

**Connecticut Department of Labor
Wage and Workplace Standards Division**

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: 117-161

Project Town: Ridgefield

State#: 117-161

FAP#: PEDS(227)

Project: Branchville TOD Pedestrian Improvements

CLASSIFICATION	Hourly Rate	Benefits
1) Boilermaker	44.46	28.51
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	38.27	34.47
2) Carpenters, Piledrivermen	36.07	26.15
2a) Diver Tenders	36.07	26.15
3) Divers	44.53	26.15
03a) Millwrights	36.32	26.81
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	55.0	23.85
4a) Painters: Brush and Roller	37.22	23.40
4b) Painters: Spray Only	39.42	22.90
4c) Painters: Steel Only	38.42	22.90

4d) Painters: Blast and Spray	40.22	23.40
4e) Painters: Tanks, Tower and Swing	39.22	23.40
4f) Elevated Tanks (60 feet and above)	46.22	23.40
5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	41.4	31.07+3% of gross wage
6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection	39.7	38.77 + a
7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9)	47.03	34.05
----LABORERS-----		
8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	32.0	24.40
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	32.25	24.40
10) Group 3: Pipelayers	32.5	24.40
11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block paver, curb setter and forklift operators	32.5	24.40
12) Group 5: Toxic waste removal (non-mechanical systems)	34.0	24.40
13) Group 6: Blasters	33.75	24.40

Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	33.0	24.40
Group 8: Traffic control signalmen	18.0	24.40
Group 9: Hydraulic Drills	32.75	24.40
----LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air.----		
13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders	34.23	24.40 + a
13b) Brakemen, Trackmen, Miners' Helpers and all other men	33.26	24.40 + a
----CLEANING, CONCRETE AND CAULKING TUNNEL----		
14) Concrete Workers, Form Movers, and Strippers	33.26	24.40 + a
15) Form Erectors	33.59	24.40 + a
----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:----		
16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers, Miners Helpers	33.26	24.40 + a
17) Laborers Topside, Cage Tenders, Bellman	33.15	24.40 + a
18) Miners	34.23	24.40 + a
----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----		

18a) Blaster	40.72	24.40 + a
19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	40.52	24.40 + a
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	38.54	24.40 + a
21) Mucking Machine Operator, Grout Boss, Track Boss	41.31	24.40 + a
----TRUCK DRIVERS----(*see note below)		
Two Axle Trucks, Helpers	31.16	28.78 + a
Three Axle Trucks; Two Axle Ready Mix	31.27	28.78 + a
Three Axle Ready Mix	31.33	28.78 + a
Four Axle Trucks	31.39	28.78 + a
Four Axle Ready-Mix	31.44	28.78 + a
Heavy Duty Trailer (40 tons and over)	33.66	28.78 + a
Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	31.44	28.78 + a
Heavy Duty Trailer (up to 40 tons)	32.39	28.78 + a
Snorkle Truck	31.54	28.78 + a
----POWER EQUIPMENT OPERATORS----		

Group 1: Crane Handling or Erecting Structural Steel or Stone, Hoisting Engineer (2 drums or over). (Trade License Required)	50.27	26.80 + a
Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and over.	46.07	26.80 + a
Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	49.91	26.80 + a
Group 2a: Cranes (under 100 ton rated capacity).	49.06	26.80 + a
Group 2b: Excavator over 2 cubic yards; Pile Driver (\$3.00 premium when operator controls hammer).	45.71	26.80 + a
Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required)	44.86	26.80 + a
Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper).	44.42	26.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" mandrel)	43.73	26.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	43.73	26.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	43.38	26.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrel)	42.99	26.80 + a
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	42.54	26.80 + a

Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder), Vacuum Excavation Truck and Hydrovac Excavation Truck (27 HG pressure or greater).	42.04	26.80 + a
Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	39.7	26.80 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	39.7	26.80 + a
Group 12: Wellpoint Operator.	39.63	26.80 + a
Group 13: Compressor Battery Operator.	38.97	26.80 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	37.66	26.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	37.2	26.80 + a
Group 16: Maintenance Engineer.	36.46	26.80 + a
Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator., Portable Grout Plant Operator, Portable Water Filtration Plant Operator.	41.39	26.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	38.61	26.80 + a

**NOTE: SEE BELOW

----LINE CONSTRUCTION----(Railroad Construction and Maintenance)----

20) Lineman, Cable Splicer, Technician	48.19	6.5% + 22.00
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21) Heavy Equipment Operator	42.26	6.5% + 19.88
22) Equipment Operator, Tractor Trailer Driver, Material Men	40.96	6.5% + 19.21
23) Driver Groundmen	26.5	6.5% + 9.00
23a) Truck Driver	40.96	6.5% + 17.76
----LINE CONSTRUCTION----		
24) Driver Groundmen	30.92	6.5% + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.1	6.5% + 10.70
27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20
28) Material Men, Tractor Trailer Drivers, Equipment Operators	35.04	6.5% + 10.45

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

- Crane with 150 ft. boom (including jib) - \$1.50 extra
- Crane with 200 ft. boom (including jib) - \$2.50 extra
- Crane with 250 ft. boom (including jib) - \$5.00 extra
- Crane with 300 ft. boom (including jib) - \$7.00 extra
- Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

~~Connecticut General Statute Section 31-55a: Annual Adjustments to wage rates by contractors doing state work
~~

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page:

www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~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 clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: June 28, 2022

Schedule 1

SPECIAL PROVISIONS
DISADVANTAGED BUSINESS ENTERPRISES
FOR FEDERAL FUNDED PROJECTS

(For Municipal Advertised and Awarded Projects Only)

Revised – February 26, 2009

NOTE: Certain of the requirements and procedures stated in this Special Provisions are applicable prior to the award and execution of the Contract document.

I. ABBREVIATIONS AND DEFINITIONS AS USED IN THIS SPECIAL PROVISION

- A. "ComDOT" means the Connecticut Department of Transportation.
- B. "DOT" means the U.S. Department of Transportation, including the Office of the Secretary, the Federal Highway Administration ("FHWA"), the Federal Transit Administration ("FTA"), and the Federal Aviation Administration ("FAA").
- C. "Broker" means a party acting as an agent for others in negotiating Contracts, Agreements, purchases, sales, etc., in return for a fee or commission.
- D. "Contract," "Agreement" or "subcontract" means a legally binding relationship obligating a seller to furnish supplies or services (including, but not limited to, construction and professional services) and the buyer to pay for them. For the purposes of this provision, a lease for equipment or products is also considered to be a Contract.
- E. "Contractor," means a prime contractor, consultant, second party or any other entity doing business with or engaged by the Municipality or, as the context may require, with or by another Contractor.
- F. "Disadvantaged Business Enterprise" ("DBE") means a small business concern:
 - 1. That is at least fifty-one percent (51%) owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which fifty-one percent (51%) of the stock of which is owned by one or more such individuals; and
 - 2. Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
- G. "DOT-assisted Contract" means any Contract between a recipient and a Contractor (at any tier) funded in whole or in part with DOT financial assistance, including letters of credit or loan guarantees.

- H. "Good Faith Efforts" means efforts to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement. Refer to Appendix A of 49 Code of Federal Regulation ("CFR") Part 26 -- "Guidance Concerning Good Faith Efforts," a copy of which is attached to this provision, for guidance as to what constitutes good faith efforts.
- I. "Small Business Concern" means, with respect to firms seeking to participate as DBEs in DOT-assisted Contracts, a small business concern as defined pursuant to Section 3 of the Small Business Act and Small Business Administration ("SBA") regulations implementing it (13 CFR Part 121) that also does not exceed the cap on average annual gross receipts specified in 49 CFR Part 26, Section 26.65(b).
- J. "Socially and Economically Disadvantaged Individuals" means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is—
1. Any individual who ConnDOT finds on a case-by-case basis to be a socially and economically disadvantaged individual.
 2. Any individuals in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - i. "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - ii. "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - iii. "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
 - iv. "Asian-Pacific Americans," which 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 Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - v. "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - vi. Women;
 - vii. Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

II. GENERAL REQUIREMENTS

- A. The Contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted Contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy, as the Municipality and ConnDOT deem appropriate.
- B. The Contractor shall cooperate with the Municipality, ConnDOT and DOT in implementing the requirements concerning DBE utilization on this Contract in accordance with Title 49 of the Code of Federal Regulations, Part 26 entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs" ("49 CFR Part 26"), as revised. The Contractor shall also cooperate with the Municipality, ConnDOT and DOT in reviewing the Contractor's activities relating to this Special Provision. This Special Provision is in addition to all other equal opportunity employment requirements of this Contract.
- C. The Contractor shall designate a liaison officer who will administer the Contractor's DBE program. Upon execution of this Contract, the name of the liaison officer shall be furnished in writing to the Municipality.
- D. For the purpose of this Special Provision, DBEs to be used to satisfy the DBE goal must be certified by ConnDOT's Division of Contract Compliance for the type(s) of work they will perform.
- E. If the Contractor allows work designated for DBE participation required under the terms of this Contract and required under III-B to be performed by other than the named DBE organization without concurrence from the Municipality, the Municipality will not pay the Contractor for the value of the work performed by organizations other than the designated DBE.
- F. At the completion of all Contract work, the Contractor shall submit a final report to the Municipality indicating the work done by, and the dollars paid to DBEs. If the Contractor does not achieve the specified Contract goals for DBE participation, the Contractor shall also submit written documentation to the Municipality detailing its good faith efforts to satisfy the goal that were made during the performance of the Contract. Documentation is to include, but not be limited to the following:
1. A detailed statement of the efforts made to select additional subcontracting opportunities to be performed by DBEs in order to increase the likelihood of achieving the stated goal.
 2. A detailed statement, including documentation of the efforts made to contact and solicit bids with ConnDOT certified DBEs, including the names, addresses, dates and telephone numbers of each DBE contacted, and a description of the information provided to each DBE regarding the scope of services and anticipated time schedule of work items proposed to be subcontracted and nature of response from firms contacted.
 3. Provide a detailed statement for each DBE that submitted a subcontract proposal, which the Contractor considered not to be acceptable stating the reasons for this conclusion.

4. Provide documents to support contacts made with ConnDOT requesting assistance in satisfying the Contract specified goal.
 5. Provide documentation of all other efforts undertaken by the Contractor to meet the defined goal.
- G. Failure of the Contractor, at the completion of all Contract work, to have at least the specified percentage of this Contract performed by DBEs as required in III-B will result in the reduction in Contract payments to the Contractor by an amount determined by multiplying the total Contract value by the specified percentage required in III-B and subtracting from that result, the dollar payments for the work actually performed by DBEs. However, in instances where the Contractor can adequately document or substantiate its good faith efforts made to meet the specified percentage to the satisfaction of the Municipality and ConnDOT, no reduction in payments will be imposed.
- H. All records must be retained for a period of three (3) years following acceptance by the Municipality of the Contract and shall be available at reasonable times and places for inspection by authorized representatives of the Municipality, ConnDOT and Federal agencies. If any litigation, claim, or audit is started before the expiration of the three (3) year period, the records shall be retained until all litigation, claims, or audits findings involving the records are resolved.
- I. Nothing contained herein, is intended to relieve any Contractor or subcontractor or material supplier or manufacturer from compliance with all applicable Federal and State legislation or provisions concerning equal employment opportunity, affirmative action, nondiscrimination and related subjects during the term of this Contract.

III. SPECIFIC REQUIREMENTS:

In order to increase the participation of DBEs, the Municipality requires the following:

- A. The Contractor shall assure that certified DBEs will have an opportunity to compete for subcontract work on this Contract, particularly by arranging solicitations and time for the preparation of proposals for services to be provided so as to facilitate the participation of DBEs regardless if a Contract goal is specified or not.
- B. The DBE contract goal percentage for the Project is 10% (Construction) and 0% (Construction Inspection). The goal shall be based upon the total contract value. Compliance with this provision may be fulfilled when a DBE or any combination of DBEs perform work under contract in accordance with 49 CFR Part 26, Subpart C Section 26.55, as revised. **Only work actually performed by and/or services provided by DBEs which are certified for such work and/or services can be counted toward the DBE goal. Supplies and equipment a DBE purchases or leases from the prime Contractor or its affiliate cannot be counted toward the goal.**

If the Contractor does not document commitments, by subcontracting and/or procurement of material and/or services that at least equal the goal, it must document the good faith efforts that outline the steps it took to meet the goal in accordance with VII.

- C. Along with the bid forms, each bidder must indicate in writing to the Municipality, on the forms provided, the DBE(s) it will use to achieve the goal indicated in III-B. The submission shall include the name and address of each DBE that will participate in this Contract, a description of the work each will perform, the dollar amount of participation, and the percentage this is of the

bid amount. This information shall be signed by the named DBE and the low bidder. The named DBE shall be from a list of certified DBEs available from ComDOT. In addition, the named DBE(s) shall be certified to perform the type of work they will be contracted to do.

- D. The prime Contractor shall submit to the Municipality all requests for subcontractor approvals on the standard forms provided by the Municipality.

If the request for approval is for a DBE subcontractor for the purpose of meeting the Contract DBE goal, a copy of the legal Contract between the prime and the DBE subcontractor must be submitted along with the request for subcontractor approval. Any subsequent amendments or modifications of the Contract between the prime and the DBE subcontractor must also be submitted to the Municipality with an explanation of the change(s). The Contract must show items of work to be performed, unit prices and, if a partial item, the work involved by all parties.

In addition, the following documents are to be attached:

1. An explanation indicating who will purchase material.
 2. A statement explaining any method or arrangement for renting equipment. If rental is from a prime, a copy of the Rental Agreement must be submitted.
 3. A statement addressing any special arrangements for manpower.
- E. The Contractor is required, should there be a change in a DBE they submitted in III-C, to submit documentation to the Municipality which will substantiate and justify the change (i.e., documentation to provide a basis for the change for review and approval by the Municipality) prior to the implementation of the change. The Contractor must demonstrate that the originally named DBE is unable to perform in conformity to the scope of service or is unwilling to perform, or is in default of its Contract, or is overextended on other jobs. The Contractor's ability to negotiate a more advantageous Agreement with another subcontractor is not a valid basis for change. Documentation shall include a letter of release from the originally named DBE indicating the reason(s) for the release.
- F. Contractors subcontracting with DBEs to perform work or services as required by this Special Provision shall not terminate such firms without advising the Municipality in writing, and providing adequate documentation to substantiate the reasons for termination if the DBE has not started or completed the work or the services for which it has been contracted to perform.
- G. When a DBE is unable or unwilling to perform, or is terminated for just cause, the Contractor shall make good faith efforts to find other DBE opportunities to increase DBE participation to the extent necessary to at least satisfy the goal required by III-B.
- H. In instances where an alternate DBE is proposed, a revised submission to the Municipality together with the documentation required in III-C, III-D, and III-E, must be made for its review and approval.
- I. Each quarter after execution of the Contract, the Contractor shall submit a report to the Municipality indicating the work done by, and the dollars paid to the DBE for the current quarter and to date.
- J. Each contract that the Municipality signs with a Contractor and each subcontract the Contractor signs with a subcontractor must include the following assurance: *The contractor, sub recipient*

or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

IV. MATERIAL SUPPLIERS OR MANUFACTURERS

- A. If the Contractor elects to utilize a DBE supplier or manufacturer to satisfy a portion or all of the specified DBE goal, the Contractor must provide the Municipality with:
1. An executed "Affidavit for the Utilization of Material Suppliers or Manufacturers" (sample attached), and
 2. Substantiation of payments made to the supplier or manufacturer for materials used on the project.
- B. Credit for DBE suppliers is limited to 60% of the value of the material to be supplied, provided such material is obtained from a regular DBE dealer. A regular dealer is a firm that owns, operates, or maintains a store, warehouse or other establishment in which the materials or supplies required for the performance of the Contract are bought, kept in stock and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must engage in, as its principal business, and in its own name, the purchase and sale of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone and petroleum products, need not keep such products in stock if it owns or operates distribution equipment. Brokers and packagers shall not be regarded as material suppliers or manufacturers.
- C. Credit for DBE manufacturers is 100% of the value of the manufactured product. A manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Municipality, Department of Transportation or Contractor.

V. NON-MANUFACTURING OR NON-SUPPLIER DBE CREDIT:

- A. Contractors may count towards their DBE goals the following expenditures with DBEs that are not manufacturers or suppliers:
1. Reasonable fees or commissions charged for providing a bona fide service such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment materials or supplies necessary for the performance of the Contract, provided that the fee or commission is determined by the Municipality to be reasonable and consistent with fees customarily allowed for similar services.
 2. The fees charged for delivery of materials and supplies required on a job site (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is a DBE but is not also the manufacturer of or a regular dealer in the materials and supplies, provided that the fees are determined by the Municipality to be reasonable and not excessive as compared with fees customarily allowed for similar services.
 3. The fees or commissions charged for providing bonds or insurance specifically required for the performance of the Contract, provided that the fees or commissions are determined by the

Municipality to be reasonable and not excessive as compared with fees customarily allowed for similar services.

VI. BROKERING

- A. Brokering of work by DBEs who have been approved to perform subcontract work with their own workforce and equipment is not allowed, and is a Contract violation.
- B. DBEs involved in the brokering of subcontract work that they were approved to perform may be decertified.
- C. Firms involved in the brokering of work, whether they are DBEs and/or majority firms who engage in willful falsification, distortion or misrepresentation with respect to any facts related to the project shall be referred to the U.S. Department of Transportation's Office of the Inspector General for prosecution under Title 18, U.S. Code, Section 10.20.

VII. REVIEW OF PRE-AWARD GOOD FAITH EFFORTS

- A. If the Contractor does not document pre-award commitments by subcontracting and/or procurement of material and/or services that at least equal the goal stipulated in III-B, the Contractor must document the good faith efforts that outline the specific steps it took to meet the goal. The Contract will be awarded to the Contractor if its good faith efforts are deemed satisfactory and approved by ConnDOT. To obtain such an exception, the Contractor must submit an application to the Municipality, which documents the specific good faith efforts that were made to meet the DBE goal. **Application form for Review of Pre-Award Good Faith Efforts is attached hereto.**

The application must include the following documentation:

1. a statement setting forth in detail which parts, if any, of the Contract were reserved by the Contractor and not available for bid by subcontractors;
2. a statement setting forth all parts of the Contract that are likely to be sublet;
3. a statement setting forth in detail the efforts made to select subcontracting work in order to likely achieve the stated goal;
4. copies of all letters sent to DBEs;
5. a statement listing the dates and DBEs that were contacted by telephone and the result of each contact;
6. a statement listing the dates and DBEs that were contacted by means other than telephone and the result of each contact;
7. copies of letters received from DBEs in which they declined to bid;
8. a statement setting forth the facts with respect to each DBE bid received and the reason(s) any such bid was declined;
9. a statement setting forth the dates that calls were made to ConnDOT's Division of Contract Compliance seeking DBE referrals and the result of each such call; and

10. any information of a similar nature relevant to the application.

The review of the Contractor's good faith efforts may require an extension of time for award of the Contract. In such a circumstance, and in the absence of other reasons not to grant the extension or make the award, the Municipality will agree to the needed extension(s) of time for the award of the Contract, provided the Contractor and the surety also agree to such extension(s).

- B. Upon receipt of the submission of an application for review of pre-award good faith efforts, the Municipality shall submit the documentation to ConnDOT initiating unit for submission to the ConnDOT Division of Contract Compliance. ConnDOT Division of Contract Compliance will review the documents and determine if the package is complete, accurate and adequately documents the Contractor's good faith efforts. Within fourteen (14) days of receipt of the documentation, the ConnDOT Division of Contract Compliance shall notify the Contractor by certified mail of the approval or denial of its good faith efforts.
- C. If the Contractor's application is denied, the Contractor shall have seven (7) days upon receipt of written notification of denial to request administrative reconsideration. The Contractor's request for administrative reconsideration should be sent in writing to the Municipality. The Municipality will forward the Contractor's reconsideration request to the ConnDOT initiating unit for submission to the DBE Screening Committee. The DBE Screening Committee will schedule a meeting within fourteen (14) days from receipt of the Contractor's request for administrative reconsideration and advise the Contractor of the date, time and location of the meeting. At this meeting, the Contractor will be provided with the opportunity to present written documentation and/or argument concerning the issue of whether it made adequate good faith efforts to meet the goal. Within seven (7) days following the reconsideration meeting, the chairperson of the DBE Screening Committee will send the Contractor, via certified mail, a written decision on its reconsideration request, explaining the basis of finding either for or against the request. The DBE Screening Committee's decision is final. **If the reconsideration is denied, the Contractor shall indicate in writing to the Municipality within fourteen (14) days of receipt of the written notification of denial, the DBEs it will use to achieve the goal indicated in III-B.**
- D. Approval of pre-award good faith efforts does not relieve the Contractor from its obligation to make additional good faith efforts to achieve the DBE goal should contracting opportunities arise during actual performance of the Contract work.

APPENDIX A TO 49 CFR PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

- I. When, as a recipient, you establish a Contract goal on a DOT-assisted Contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which you have established a Contract goal, Part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE Contract goal. Mere *pro forma* efforts are not good faith efforts to meet the DBE Contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.
- III. The Department also strongly cautions you against requiring that a bidder meet a Contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a Contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring *bona fide* good faith efforts.
- IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
 - A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the Contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
 - B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.

- C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation.
- D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.
- (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as Contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the Contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime Contractor to perform the work of a Contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the project goal.
- F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- H. Effectively using the services of available minority/women community organizations; minority/women Contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the Contract. For example, when the apparent successful bidder fails to meet the Contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

**AFFIDAVIT FOR THE UTILIZATION OF
MATERIAL SUPPLIERS OR MANUFACTURERS**

This affidavit must be completed by the Municipality Contractor's DBE notarized and attached to the Contractor's request to utilize a DBE supplier or manufacturer as a credit towards its DBE Contract requirements; failure to do so will result in not receiving credit towards the Contract DBE requirement.

State Project No.

Federal Aid Project No.

Description of Project

I, _____, acting in behalf of _____
(Name of person signing Affidavit) (DBE person, firm, association or organization)
of which I am the _____ certify and affirm that _____
(Title of Person) (DBE person, firm, association or organization)

is a certified Connecticut Department of Transportation DBE. I further certify and affirm that I have read and understand 49 CFR, Sec. 26.55(e)(2), as the same may be revised.

I further certify and affirm that _____ will assume the actual and
(DBE person, firm, association or organization)

contractual responsibility for the provision of the materials and/or supplies sought by _____
(Municipality Contractor)

If a manufacturer, I produce goods from raw materials or substantially alter them before resale, or if a supplier, I perform a commercially useful function in the supply process.

I understand that false statements made herein are punishable by Law (Sec. 53a-157), CGS, as revised).

(Name of Organization or Firm)

(Signature & Title of Official making the Affidavit)

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

Notary Public (Commissioner of the Superior Court)

My Commission Expires

CERTIFICATE OF CORPORATION

I, _____, certify that I am the _____ (Official)
of the Organization named in the foregoing instrument; that I have been duly authorized to affix the seal of the Organization to such papers as
require the seal; that _____, who signed said instrument on behalf of the Organization, was then _____
of said Organization; that said instrument was duly signed for and in behalf of said Organization by authority of its governing body and is within
the scope of its organizational powers.

(Signature of Person Certifying)

(Date)

NOTICE TO CONTRACTOR – BUY AMERICA

The Contractor is hereby advised that several items proposed for this project are subject to the Buy America requirements. Please refer to Section 1.06 of the standard specifications and FHWA's regulatory policy regarding Buy America (Title 23 C.F.R. 635.410 and 49 U.S.C. 5323(j)). The Contractor shall also be responsible for compliance by any subcontractor, lower tier subcontractor, or service provider.

NOTICE TO CONTRACTOR – RECENT REVISIONS

The Contractor is hereby notified that the following Traffic Engineering Special Provisions have been revised:

Section 1.07 – Legal Relations and Responsibilities

- Updated service entrance inspection requirements.

Section 10.00 – General Clauses for Highway Illumination and Traffic Signal Projects

- Updated as-built plan requirements
- Added testing for video detection

1015034A – Grounding and Bonding

- Added new Special Provision for grounding and bonding procedure.

1106xxxA – X_Way_Pedestrian Signal:

- Painting requirements for housing, brackets, and hardware have been moved to Form 818.

1107011A – Accessible Pedestrian Signal and Detector (Type A)

- Painting requirements for housing, brackets, and hardware have been moved to Form 818.
- Changed the sign size to 9” x 15”
- Changed to include confirmation light

1112285A - Thermal Video Detector Assembly

- Clarified the site surveys are to be conducted in the field.

1112286A – 360 Degree Camera Assembly

- Added installation best practices guide
- Clarified the site surveys are to be conducted in the field.

The Contractor is hereby notified that the following Traffic Engineering guide sheets are included:

GS_Concrete Handhole

- Added Portland Cement concrete number.

The Contractor is hereby notified that the following Traffic Engineering Special Provision is no longer required. All pertinent information is included in the Form 818:

1001001A – Trenching and Backfilling

NOTICE TO CONTRACTOR – COORDINATION WITH EXISTING UTILITY COMPANIES

Utility relocations by others, is required within the project limits. The Contractor shall schedule his operations in such a manner as to minimize interference with utility relocation/protection activities. There are utility relocations for both aerial and underground utilities planned for the project area. The proposed relocations are shown on the utility relocation plans for information purposes only and are subject to change to meet the facility owner's needs.

As required by State Law, the Contractor shall contact "Call Before You Dig." Telephone 1-800-922-4455 for the location of public utility underground facilities in accordance with section 16-345 of the Regulations of the Department of Public Utility Control. The underground activities should be clearly delineated within the areas of proposed excavation prior to performing actual excavation. The notification to "Call Before You Dig" must be made at least 48 hours in advance.

Contractors are cautioned that it is their responsibility to verify location, conditions and filed dimensions of all existing features as actual conditions may differ from information shown on the plans or continued elsewhere in the specifications.

The Contractor shall place fill or excavate to within 1 foot of finished grade before poles/anchors are set. Additionally, the Contractor is required to mark out necessary road markings (edge of curb, sidewalk etc.) in field prior to pole/anchor placement.

The Contractor shall consider in his bid any inconvenience and work required to meet these conditions. The work to repair or replace any damage to utilities caused by the Contractor's operations will be solely at the Contractor's expense, in accordance with Form 818, Section 1.07.

In the areas where the proposed drainage is to be located, the Contractor is advised to use extra precaution where this drainage passes near the existing utilities. The Contractor will be responsible for providing temporary and permanent supports in these areas. Exposure and undermining is required to be kept at a minimum.

The Contractor shall notify the Engineer prior to the start of his work and shall be responsible for all coordination. The Contractor shall allow the Engineer complete access to the work.

The Contractor is hereby notified that the utility work schedules will have to be accommodated prior to proceeding. The Contractor shall coordinate with the utility companies to accommodate his schedule with all utility company schedules. Any inconvenience or delay that may result from the utility company work shall be included in the contract bid for the work.

The contractor is hereby notified that the following utility work taking place within the project limits by the respective utility company:

- Eversource and Frontier Communications will be relocating multiple utility poles on Ethan Allen Highway (Route 7) and Branchville Road (Route 102)

The proposed relocations are shown on the utility relocation plans for information purposes only and are subject to change.

The contractor shall notify the following utility company representatives a minimum of thirty (30) days prior to the start of the road construction work that could affect their utilities.

STORM WATER – TOWN OF RIDGEFIELD

Mr. Charles Fisher, PE, LS
Town Engineer
60 Prospect Street
Ridgefield, CT 06877
(203) 431-2751
Cf.eng@ridgefield.org

AQUARION WATER COMPANY OF CONNECTICUT

Mr. Carlos Vizcarrondo
Relocations Coordinator
600 Lindley Street
Bridgeport, CT 06606
(203) 337-5950
cvizcarrondo@aquarionwater.com

EVERSOURCE ENERGY – ELECTRIC DISTRIBUTION

Mr. Mark Bonjuklian
Manager - Distribution Projects and Programs
9 Tindall Avenue
Norwalk, CT 06851
203-845-3456
Mark.bonjuklian@eversource.com

FRONTIER COMMUNICATIONS OF CONNECTICUT

Ms. Lynne DeLucia,
Manager - Engineering & Construction
1441 North Colony Road
Meriden, CT 06450-4101
(203) 383-6645
Lynne.m.delucia@ftr.com

CROWN CASTLE FIBER

Mr. Eric Clark,
Operations Manager
1781 Highland Avenue, Suite 102
Cheshire, CT 06410
203-649-3904 EXT: Mobile: 860-863-8311
Eric.Clark@crowncastle.com

COMCAST OF CONNECTICUT, INC

Mr. Chad Raetz
Construction Supervisor CT/NY
222 New Park Drive
Berlin, CT 06037
(518) 361-7234
Chad_raetz@cable.comcast.com

EVERSOURCE ENERGY - GAS

Mr. David Hatfield
Lead Engineer, Gas Project Engineering
107 Selden Street, Mail Stop NUE2
Berlin, CT 06037
(203) 592-3494
David.Hatfield@Eversource.com

NOTICE TO THE CONTRACTOR – EXISTING UTILITIES

Existing utilities, shall be maintained during construction except as stated in the notice to contractor and/or noted on the plans. The Contractor shall verify the location of underground, structure mounted, and overhead utilities. Construction work within the vicinity of utilities shall be performed in accordance with current safety regulations.

The Contractor shall notify “Call before You Dig,” telephone: 1-800-922-4455, for the location of public utilities, in accordance with Section 16-345 of the Regulations of the Department of Utility Control.

Contractors are cautioned that it is their responsibility to verify locations, conditions, and field dimensions of all existing features, as actual conditions may differ from the information shown on the plans or contained elsewhere in the specifications.

Also, refer to “Section 1.07 - Legal Relations and Responsibilities.”

There will be situations where the existing utilities will need to be braced/protected for the proposed construction. The Contractor shall coordinate the bracing of utility with the owner of the utility. There will be NO additional compensation for the bracing/protection of existing utilities, the cost of these activities is to be included in the unit cost of the bid items associated with this work.

NOTICE TO CONTRACTOR – UTILITY GENERATED SCHEDULE

The attached project specific utility work schedules were provided to the Connecticut Department of Transportation (Department) by the utility companies regarding their identified work on this project.

The utility scheduling information is provided to assist the Contractor in scheduling its activities. However, the Department does not ensure its accuracy and Section 1.05.06 of the Standard Specifications still is in force.

The utility scheduling information shall be incorporated into the Contractor's pre-award schedule in accordance with the Department's Bidding and Award Manual and Section 1.05.08 of the Contract.

After award, the Contractor shall conduct a utility coordination meeting or meetings to obtain contemporaneous scheduling information from the utilities prior to submitting its baseline schedule to the Department in accordance with Section 1.05.08 of the Contract.

The Contractor shall incorporate the contemporaneous utility scheduling information into its baseline schedule submittal. The baseline schedule shall include Contractor predecessor and successor activities to the utility work in such detail as acceptable to the Engineer.

UTILITY WORK SCHEDULE Rev 3/2015

CTDOT Project Number:	117-161	Town:	Southbury
Project Description:	Branchville Rd Pedestrian Improvements		
CTDOT Utilities Engineer:	Latoya Smith		
Phone:		Email:	latoya.smith@ct.gov

Utility Company:	Eversource Energy (Electric)		
Prepared By:	Matthew Geary	Date Prepared:	12/29/2021
Phone:	203-270-5927	Email:	matthew.geary@eversource.com

Scope of Work

The following is a description of all utility work planned to be completed in conjunction with the CTDOT project. The narrative describes all work to be carried out by the utility or its contractor, including temporary and permanent work required by the project as well as any additional utility infrastructure work the utility intends on performing within the project limits during the construction of the project.

Replace and relocate existing facilities at 6 Frontier-set poles. Civil work is required for two poles to relocate underground risers and conduit. One recloser will be replaced at pole 104.

Special Considerations and Constraints

The following describes the limiting factors that must be planned for in the scheduling and performance of the utility work. For example, restrictions on cut-overs, outages, limitations on customer service interruptions (e.g. nights, weekends, holidays), seasonal and environmental shutdown periods, long lead material procurements, etc..

Inclement weather may cause a change to this schedule. Customer outages could cause a delay in this schedule. All permits to be obtained by CDOT. State must mark out all property lines, curb and sidewalks. Drainage locations will need to be marked out by State where drain is within a 10' proximity to the utility relocation. State to make area ready to relocation prior to the utilities starting work, including all clearing and access to poles. State to ensure proper R.O.W for relocated poles.

UTILITY WORK SCHEDULE Rev 08 02 2016

CTDOT Project Number: 117-161	Town: Ridgefield
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Project Description: Branchville TOD Pedestrian Improvements

CTDOT Utilities Engineer:

Phone:	Email:
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Utility Company: Frontier Communications

Prepared By: Don Bialecki	Date Prepared: 1/4/2022
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Phone: 203-575-6114	Email: donald.s.bialecki@ftr.com
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Scope of Work

The following is a description of all utility work planned to be completed in conjunction with the CTDOT project. The narrative describes all work to be carried out by the utility or its contractor, including temporary and permanent work required by the project as well as any additional utility infrastructure work the utility intends on performing within the project limits during the construction of the project.

This project will improve the roadway and pedestrian access at the intersection of RT #7 and RT # 102. Frontier will need to relocate pole #6350 on RT #7 and relocate poles #104 and #105 on RT #102. Frontier will shift existing cables over to new poles and remove existing poles.

Special Considerations and Constraints

The following describes the limiting factors that must be planned for in the scheduling and performance of the utility work. For example, restrictions on cut-overs, outages, limitations on customer service interruptions (e.g. nights, weekends, holidays), seasonal and environmental shutdown periods, long lead material procurements, etc..

UTILITY WORK SCHEDULE Rev 08 02 2016

CTDOT Project Number:	117-161	Town:	Ridgefield
Project Description: Intersection Improvement Branchville Rd./Ethan Allen Hwy.			
CTDOT Utilities Engineer:			
Phone:		Email:	
Utility Company: Comcast			
Prepared By: Bruce Ollayos		Date Prepared: 12/15/2021	
Phone: 203-759-8160		Email: bruce_ollayos@comcast.com	

Scope of Work

The following is a description of all utility work planned to be completed in conjunction with the CTDOT project. The narrative describes all work to be carried out by the utility or its contractor, including temporary and permanent work required by the project as well as any additional utility infrastructure work the utility intends on performing within the project limits during the construction of the project.

725 Branchville Rd: Remove attachment to pole#106 and resag span btwn poles 105 & 107. Remove 23 tap and DC8 at pole 106, change to straight splice. // 71 Ethan Allen Hwy: Transfer riser & aerial attachments to new location of pole 6350. Install new conduit and reroute coax from old pole location to new pole location about 4 feet closer to road.

Special Considerations and Constraints

The following describes the limiting factors that must be planned for in the scheduling and performance of the utility work. For example, restrictions on cut-overs, outages, limitations on customer service interruptions (e.g. nights, weekends, holidays), seasonal and environmental shutdown periods, long lead material procurements, etc..

UTILITY WORK SCHEDULE Rev 3/2015

CTDOT Project Number: 117-161

Utility Company: Comcast

Prepared By: Bruce Ollayos

Total Working Days: 4.5

Schedule

The following schedule identifies each major activity of utility work in sequential order to be performed by the utility or its contractor. The location of each activity of work is identified by the baseline stationing on the CTDOT plans. All activities identify the predecessor activity which must be completed before a utility work activity may progress. The duration provided is the number of working days required to complete the utility work activity based on historical information and production rates.

Location (Station to Station)	Description of Utility Work Activity	Predecessor Activity	Duration (working days)
12/10/2021	Survey job site.	N/A	0.5
TBD	Remove attachments at pole2 105, 106 and 107.	N/A	1
TBD	Transfer cables to new poles.	N/A	1
TBD	Reroute cable into new conduit.	N/A	2

UTILITY WORK SCHEDULE Rev 3/2015

CTDOT Project Number:	0117-0161	Town:	RIDGEFIELD
Project Description:	PEDESTRIAN IMPROVVEMENTS		
CTDOT Utilities Engineer:	LATOYA SMITH		
Phone:	(860)594-2533	Email:	latoya.smith@ct.gov
Utility Company:	CROWN CASTLE FIBER		
Prepared By:	TERENCE J SHEA	Date Prepared:	
Phone:	(203)649-3905	Email:	terence.shea@crowncastle.com

Scope of Work

The following is a description of all utility work planned to be completed in conjunction with the CTDOT project. The narrative describes all work to be carried out by the utility or its contractor, including temporary and permanent work required by the project as well as any additional utility infrastructure work the utility intends on performing within the project limits during the construction of the project.

Crown Castle Fiber's work will consist of transferring facilities at two poles and removing facilities at one pole.

Special Considerations and Constraints

The following describes the limiting factors that must be planned for in the scheduling and performance of the utility work. For example, restrictions on cut-overs, outages, limitations on customer service interruptions (e.g. nights, weekends, holidays), seasonal and environmental shutdown periods, long lead material procurements, etc..

PLEASE NOTE THAT ANY TIME FRAME GIVEN AS A START TIME OR DURATION OF WORK CAN BE AFFECTED BY MANY FACTORS INCLUDING, BUT NOT LIMITED TO, MAKE READY WORK, OTHER UTILITIES, PERMIT APPLICATIONS, CHANGES IN SCOPE, INCLEMENT WEATHER, HOLIDAYS AND EMERGENCY SITUATIONS.

NOTICE TO CONTRACTOR —PERMITS

The Contractor is hereby notified of permits associated with the work. The Contractor is bound to any conditions listed as part of the permit application approvals.

The Contractor may be required to incorporate special protections to perform the work while minimizing impacts to the environmentally sensitive surroundings.

The following permit approvals and conditions are included in Attachment A:

- The Town of Ridgefield Inland Wetlands Commissions Permit Approval Letter with Conditions.
- Flood Management Certification (FMC)

ATTACHMENT A



TOWN OF RIDGEFIELD

Inland Wetlands Board

ADOPTED RESOLUTION OF APPROVAL **SUMMARY RULING APPLICATION**

Summary Ruling application to construct a sidewalk and pedestrian bridge within a watercourse (Cooper Pond Brook) corridor with abutments constructed within the upland review area in addition to road construction at the intersection of Branchville Road and Ethan Allen Highway within the upland review area at the confluence of Cooper Pond Brook and the Norwalk River.

Branchville Road and Ethen Allen Highway

Assessor's ID No: G16-0105

Applicant/Owner: Raina Volovski, Tighe and Bond/Town of Ridgefield

Authorized Agent: Raina Volovski

File #IW-21-19

NOW, THEREFORE BE IT RESOLVED, the Inland Wetlands Board of the Town of Ridgefield under Section 8.7 of the Ridgefield Inland Wetlands and Watercourses Regulations (IWWR) hereby approves the Summary Ruling application for the following activities;

- Construction of a steel truss pedestrian bridge over Cooper Pond Brook
- Removal of a median and grading/ widening of the roadway
- Construction of six-foot wide concrete sidewalks and ramps
- Reconstruction of commercial driveways
- Relocation of utility poles
- Installation of timber guardrails
- Creation of flood retention mitigation area with associated landscaping and planting

All work will take place within the upland review area of two watercourses, Cooper Pond Brook and the Norwalk River, at 0 Branchville Road, Assessor's ID No: G16-0105, in accordance with the stipulations and conditions listed below:

Plans and Specifications:

1. "Wetland Delineation Report, Branchville TOD Pedestrian Improvements Project",

prepared by Fitzgerald and Halliday, dated December 2019.

2. "Town of Ridgefield Branchville TOD Pedestrian Improvements, Semi-Final Design" prepared by Tighe and Bond, dated February 26, 2021.
3. Proof of Notice by Applicant to Connecticut Department of Public Health, dated March 1, 2021.
4. Proof of Notice by Applicant to South Norwalk Electric & Water/Water Operations Department, dated April 6, 2021.
5. "Branchville TOD Pedestrian Improvements Project", prepared by Tighe and Bond, dated March, 2021, revised April 6, 2021.
6. "Semi-Final Design, Bank Restoration Plan", prepared by Tighe and Bond, dated February 26, 2021, revised May 10, 2021

Special Conditions:

1. Prior to the commencement of any on-site permit related activity, final site plans shall be submitted for review and approval by the Wetlands Board's Authorized Agent. Once approved, plans shall be submitted in both paper and digital formats.
2. Areas to be maintained as meadow may be mowed no more than twice a year; once in mid-summer and once in late winter.
3. Upon completion of construction activities, an A-2 survey "as-built" shall be submitted. A copy of this plan shall be submitted to the Board's Authorized Agent for review and approval. A copy of the approved plan shall be submitted in both paper and digital formats.
4. Work within the watercourse corridor shall be limited to periods of low flow. Low flow periods normally occur between August and October. The Wetlands Board's Authorized Agent may determine if the work can occur at other times following an on-site field investigation to evaluate flow conditions.
5. The stands of Japanese knotweed shall be removed in accordance with CT Invasive Plants Working Group guidelines, or guidance from similar institutions. The five (5) years of monitoring shall include continued control of Japanese knotweed.
6. After the planting plan is fully implemented as verified by the Board's Authorized Agent, trees and shrubs shall be monitored for five (5) years. To achieve compliance, evaluation of target survival shall demonstrate 80% of shrubs and 100% of trees to be thriving.

Standard Conditions:

1. This permit expires on May 21, 2035. If the authorized activity is not completed on or before this date, said activity shall cease and, if not previously revoked or specifically extended, this permit shall be null and void.
2. **Prior to the commencement of any on-site permit related activity, the attached compliance statement shall be signed by the contractor engaged to perform the regulated activities and then returned to the Board office. This form shall serve as written notice to the Board as to when work is planned to commence.** The permittee shall also provide written notice to the Board upon completion of the regulated activities.
3. The permittee shall employ best management practices, consistent with the terms and conditions of this permit and provisions of the *Connecticut Guidelines for Soil Erosion and Sediment Control* (2002, as revised), to control storm water discharges, to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Board's Authorized Agent. The permittee shall immediately inform the Board and its Authorized Agent of any problems involving wetlands or watercourses which develop during the course of, or which are caused by, the authorized work.
4. Any material, man-made or natural, which is in any way disturbed and/or utilized during work authorized herein, shall not be deposited in any wetland or watercourse, either on or off site, unless specifically authorized in this permit
5. Fuel oil tanks shall be installed above ground or within the structure unless specifically approved otherwise by the Board or its Authorized Agent.
6. This permit shall not be assigned or transferred by the permittee to any other party without the written consent of the Ridgefield Inland Wetlands and Watercourses Board.
7. This permit may be revoked or suspended if the permittee exceeds the conditions or limitations of this permit, or has secured this permit through deception or inaccurate information.
8. This permit does not obviate the permittee's obligation to obey all other applicable federal, state and local laws or to obtain any applicable federal, state and local permits.
9. The Inland Wetlands Agent is authorized to approve minor modifications to the approved plans. If the Agent determines that a proposed modification warrants additional review, the Agent will instruct the applicant to present the modification to the Inland Wetlands Board for review.
10. In accordance with Sec. 22a-42a of the Connecticut General Statutes, the permit issued under the IWWR is valid for a period of 14 years. Work shall be completed within two (2)

years from commencement of construction activity unless otherwise authorized by the Board. The Board may grant an extension of the permit for a period not to exceed five (5) additional years, provided that an application for such an extension is made prior to the expiration of the original 14-year period.

11. Prior to the initiation of any disturbance on the site, erosion and sedimentation control measures shall be installed in accordance with the approved Plans and the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*, DEP Bulletin 34. Erosion and sedimentation control and standard construction practices shall follow the notes and details shown on the Plans, and ensure that:
 - a. There shall be no silty water leaving the site.
 - b. At a minimum, multiple layers of erosion control barriers are located at the most vulnerable points, and when applicable, include additional enhanced measures, per Planning and Zoning Department standards, effective September 1, 2018.
 - c. Erosion control measures are to be maintained and repaired throughout the construction process and until the site is fully stabilized, including inspection, repair and maintenance after significant storm events (1/2" of rainfall or greater), per the requirements in the *2002 Connecticut Guidelines*.
 - d. Inland Wetlands Agent shall reserve the right to require additional erosion control measures as needed throughout the construction process.

12. In granting this approval, the Board has relied on information and documentation submitted by the applicant and consultants, and if this information proves to be false, deceptive, incomplete and/or inaccurate, the permit may be modified, suspended or revoked.

Considerations and Reasons:

In evaluating this application, the Board considered the “Standards and Criteria for Decision” in Section 10.2 of the IWWR and determined that, upon consideration of all of the credible evidence and testimony, the proposed activity will not have a detrimental effect on wetlands and watercourses located on or off-site, provided that the work is performed as described on the plans and as conditioned by this approval.

Approved: 05/13/2021
Published: 05/20/2021
Effective: 05/21/2021
Expiration: 05/21/2035



TOWN OF RIDGEFIELD

Inland Wetlands Board

IWB Permit Application # _____

As the contractor engaged by, _____ to

perform the activities described in the Ridgefield Inland Wetlands Permit # **IW** - _____ - _____

at _____ I have read the permit
(PROPERTY ADDRESS)

and will comply with all conditions therein.

Work will commence on or about _____ and be completed within _____ months.

Contractor Name

Address

City

State

Zip Code

Telephone Number

Fax Number

Email Address

Signature

MAIL TO: Ridgefield Inland Wetlands Board
Town Hall Annex
66 Prospect Street
Ridgefield, CT 06877
Telephone: (203) 431-2766
Email to: wetlands@ridgefieldct.org



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION



2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546

May 12, 2022

The Honorable Rudy Marconi
First Selectman
Town of Ridgefield
400 Main Street
Ridgefield, Connecticut 06877

Dear Selectman Marconi:

Subject: Flood Management Certification (FMC)
State Project No. 0117-0161
Branchville TOD Pedestrian Improvement
Town of Ridgefield

In accordance with the Memorandum of Understanding (MOU) between the Connecticut Department of Transportation (Department) and the Connecticut Department of Energy and Environmental Protection (DEEP) regarding flood management certifications for municipal projects, the Department has completed the review of the flood management certification prepared and submitted for the Town of Ridgefield for the subject project. The certification states that the proposed activity is consistent with all applicable standards and criteria established in Section 25-68d(b) of the Connecticut General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

The proposed project involves the construction of a pedestrian bridge, adjacent to Route 7, over Cooper Pond Brook, in Ridgefield, Connecticut, as shown on the Final Design Plans dated February 7, 2022 (signed May 4, 2022) and documented in the Final Design Hydraulic Analysis Report and the Floodplain and Floodway Report, revised February 7, 2022 and April 19, 2022, respectively. The project is located within the 100-year Flood Zone AE of Cooper Pond Brook.

The certification is complete and approved, subject to the following standard conditions and project-specific information:

Standard Conditions:

1. Time of Year Restriction on In-water Construction

- a. Between September 30th and May 31st the municipality shall not place fill, excavate material, or conduct any other construction activity in any watercourse unless such activity is confined by a cofferdam or other device which isolates such activity from the watercourse, unless the DEEP Inland Fisheries Division has given written authorization otherwise.
 - b. The municipality shall not place fill, excavate material, or conduct any other activity in any watercourse stocked with fish by the Commissioner or any other person, or in any tributary to such watercourse, from 12:01 a.m. on the Monday preceding the third Saturday in April through 12 midnight on the Sunday preceding the fourth Saturday in April.
 - c. The municipality shall not place fill, excavate material or conduct any other construction activity in or adjacent to any watercourse, which activity may adversely affect anadromous fish, during the time period when anadromous fish are known or reasonably believed to be migrating in the watercourse.
2. Pollution Prevention/Best Management Practices

The municipality shall not cause or allow the authorized activity, including any construction associated therewith, to result in pollution or other environmental damage and shall employ best management practices to prevent such damage. The municipality shall, in addition to employing any other best management practices necessary to prevent such damage, do the following:

- a. Controlling Erosion

The municipality shall install and maintain in optimal condition erosion and sedimentation controls to prevent erosion and discharge of material into any waters of the state, including wetlands, as a result of the authorized activity or any construction associated therewith. Such controls shall be installed and maintained in conformance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, as revised, published by the Connecticut Council on Soil and Water Conservation pursuant to Section 22a-328 of the Connecticut General Statutes.
 - b. Proper Disposal of Material

All material and solid waste generated during any construction associated with such activity shall be disposed of in accordance with applicable federal, state and local law.
3. Storage of equipment/material within the floodplain should be avoided; but, if absolutely necessary, the municipality will require the contractor to remove equipment and materials from the 100-year floodplain during periods when flood warnings have been issued or are anticipated by a responsible federal, state or local agency. It shall be the contractor's responsibility to be knowledgeable of such warnings when flooding is anticipated.

4. Work shall not be conducted in or adjacent to watercourses and reservoirs used as public drinking water supply sources without coordination with the water supply utility and the Department of Public Health.
5. All temporary structures, cofferdams, and fill shall not impede the movement of flood flows and shall be removed at the completion of their use. The design of such temporary structures, cofferdams and fill shall be based on the DOT Drainage Manual, where applicable. Sheet piling that is cut 1 foot below existing grade shall be considered removed.
6. All fill shall be clean material, free of stumps, rubbish, hazardous, and toxic material.
7. Once work is initiated, it shall proceed rapidly and steadily until completed and stabilized in order to minimize use of temporary structures and to minimize soil erosion.

Please be advised of the following project-specific information:

1. Pursuant to Standard Condition 1.c, coordination with DEEP Inland Fisheries Division concluded that there were no anadromous fish of concern within the project area.
2. Pursuant to the DEEP Natural Diversity Data Base (NDDDB) Determination No. 202203710 (letter attached), if Box Turtles are encountered on site they should be moved out of the active work area, to an adjacent area. Contact the NDDDB to report the presence of any listed species and for more guidance.

A copy of the completed certification forms is attached for your records. No revisions or alterations to the approved plans are allowed without first obtaining written approval from the Department for such alterations.

This letter and certification forms must be attached to any subsequent permit applications for the municipal project that are submitted to the DEEP or the U.S. Army Corps of Engineers.

If there are any questions, please contact Mr. Michael Hogan, Transportation Principal Engineer for the Hydraulics and Drainage Section, at michael.hogan@ct.gov.

Very truly yours,

 Theodore H. Nezames, P.E.
2022.05.10 13:36:29-04'00'

Theodore H. Nezames, P. E.
Engineering Administrator
Bureau of Engineering and Construction

Enclosures

cc: Mr. Jeff Caiola, DEEP

**Statewide Flood Management Certification for
Federally and State Funded Municipal Projects**

Attachment A: DOT

A-1: Engineering Certification

Name of Subject Facility and DOT Project Number:

117-161 Branchville TOD Pedestrian Improvement Project

Name of floodplain and watercourse:

Cooper Pond Brook

I hereby certify, in reliance on the Municipal Official Certification, the Town Engineer / Consultant-Professional Certification, the DOT Hydraulics and Drainage Section and the DOT Environmental Planning reviews, that the above referenced project qualifies for the DEP Commissioner's approval pursuant to Section 25-68d of the General Statutes, and that the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

Signature: _____



Theodore H.
Nezames, P.E.
2022.05.10
13:37:18-04'00'

_____ Date _____

Print/Type: _____

Theodore H. Nezames

Transportation Engineering Administrator
Bureau of Engineering and Construction

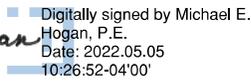
**Statewide Flood Management Certification for
Federally and State Funded Municipal Projects**

Attachment A: DOT

DOT Project No. 117-161

A-2: Hydraulics and Drainage Section Review

Based on my review and reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

Signature:   _____ Date _____

Digitally signed by Michael E. Hogan, P.E.
Date: 2022.05.05 10:26:52-04'00'

Print/Type: Michael E. Hogan
Transportation Principal Engineer
Hydraulics and Drainage Section

A-3: Environmental Planning Review

Based on my review and reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the proposed activity described in this application is consistent with all applicable standards found in the 2004 Connecticut Stormwater Manual, 2002 Erosion and Sedimentation Control Guidelines (as amended) and that there has been proper coordination with the Inland Fisheries Division and the Natural Diversity Database.

Signature:  _____ Date _____

Digitally signed by Andrew H Davis
DN: C=US, E=andrew.h.davis@ct.gov,
O=Connecticut Department of Transportation,
OU=Natural Resources Planning,
CN=Andrew H Davis
Date: 2022.05.05 12:25:55-04'00'

Print/Type: Andrew H. Davis
Transportation Supervising Planner
Office of Environmental Planning

**Statewide Flood Management Certification for
Federally and State Funded Municipal Projects**

Attachment B: Municipality

B-1: Municipal Official Certification

Name of Applicant / Municipality: Town of Ridgefield, Connecticut

DOT Project No.: 117-161

Description of Proposed Project: Pedestrian Improvements project in the Branchville section of Ridgefield, CT. Improvements include sidewalks, crosswalks, sidewalks ramps, and pedestrian bridge over Cooper Pond Brook.

1. The recipient of federal and/or state funding will be:

Name: Town of Ridgefield

Mailing Address: 400 Main St, Upper Level

City/Town: Ridgefield

State: CT

Zip Code: 06877

Phone: 203-431-2774

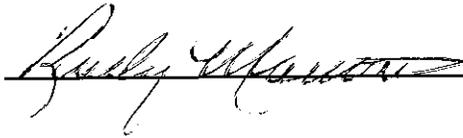
ext.

Fax:

Based on my review and reasonable investigation, including my inquiry of those individuals responsible for preparing the information, the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes.

Signature:



Date

9/3/21

Print/Type:

Rudy Marconi
First Selectman

**Statewide Flood Management Certification for
Federally and State Funded Municipal Projects**

Attachment B: Municipality

B-2: Town Engineer / Consultant - Professional Certification

DOT Project No.: 117-161

Description of Proposed Project: Pedestrian Improvements project in the Branchville section of Ridgefield, CT. Improvements include sidewalks, crosswalks, sidewalks ramps, and pedestrian bridge over Cooper Pond Brook.

Plan Dated and Revised Through: ~~Dated June 26, 2021; Revised Through August 19, 2021~~

Final Design Hydraulic Analysis and Floodplain and Floodway Reports,
revised February 7, 2022 and April 19, 2022, respectively

Hydrologic and Hydraulic Study Dated: ~~August 19, 2021~~

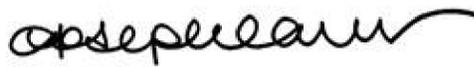
Final Design Plans dated February 7, 2022 (signed May 4, 2022)

Michael E. Hogan
Digitally signed by Michael E. Hogan, P.E.
Reason: Date Revisions
Date: 2022.05.05
10:28:33-04'00"

I hereby certify that the prepared information and the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes.

Signature: _____



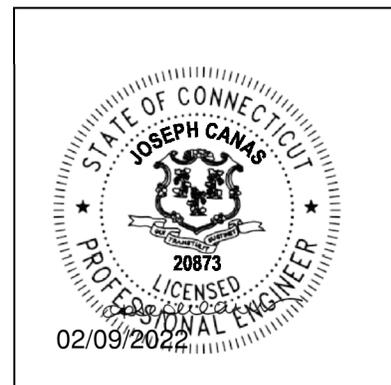
02/09/2022

Date

Print/Type: _____

Joseph Canas, PE, LEED AP, CFM

P.E. Number: 20873



April 4, 2022

Jonathan Richer
Tighe & Bond
1000 Bridgeport Ave, Suite 320
Shelton CT 06484
jaricher@tighebond.com

Project: Branchville TOD Pedestrian Improvements along US Route 7 and Route 102 in Ridgefield, CT
NDDDB Determination No.: 202203710

Dear Jonathan Richer,

I have reviewed Natural Diversity Database (NDDDB) maps and files regarding the area of work provided for the proposed installation of sidewalks, a pedestrian bridge and other pedestrian improvements along Route 102 (Branchville Road) and US Route 7 (Ethan Allen Highway) in Ridgefield, Connecticut. According to our records there are State Special Concern Eastern box turtles (*Terrapene carolina carolina*) in the vicinity of the project site. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDDB. The result of this review does not preclude the possibility that listed species, including Eastern box turtles, may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. If turtles are encountered on site they should be moved out of the active work zone, to an adjacent area. Contact NDDDB to report the presence of any listed species and for more detailed guidance. This determination is good for two years. Please re-submit a new NDDDB Request for Review if the scope of work changes or if work has not begun on this project by April 4, 2024.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or karen.zyko@ct.gov . Thank you for consulting the Natural Diversity Database.

Sincerely,



Karen Zyko
Environmental Analyst

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Eastern Box Turtle

Terrapene carolina carolina

Description

The eastern box turtle is probably the most familiar of the 8 species of turtles found in Connecticut's landscape. It is known for its high-domed carapace (top shell). The carapace has irregular yellow or orange blotches on a brown to black background that mimic sunlight dappling on the forest floor. The plastron (under shell) may be brown or black and may have an irregular pattern of cream or yellow. The length of the carapace usually ranges from 4.5 to 6.5 inches, but can measure up to 8 inches long. The shell is made up of a combination of scales and bones, and it includes the ribs and much of the backbone.

Each individual turtle has distinctive head markings. Males usually have red eyes and a concave plastron, while females have brown eyes and a flat plastron. Box turtles also have a horny beak, stout limbs, and feet that are webbed at the base. This turtle gets its name from its ability to completely withdraw into its shell, closing itself in with a hinged plastron. Box turtles are the only Connecticut turtle with this ability.

Range

Eastern box turtles are found throughout Connecticut, except at the highest elevations. They range from southeastern Maine to southeastern New York, west to central Illinois, and south to northern Florida.

Habitat and Diet

In Connecticut, this terrestrial turtle inhabits a variety of habitats, including woodlands, field edges, thickets, marshes, bogs, and stream banks. Typically, however, box turtles are found in well-drained forest bottomlands and open deciduous forests. They will use wetland areas at various times during the season. During the hottest part of a summer day, they will wander to find springs and seepages where they can burrow into the moist soil. Activity is restricted to mornings and evenings during summer, with little to no nighttime activity, except for egg-



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laying females. Box turtles have a limited home range where they spend their entire life, ranging from 0.5 to 10 acres (usually less than 2 acres).

Box turtles are omnivorous and will feed on a variety of food items, including earthworms, slugs, snails, insects, frogs, toads, small snakes, carrion, leaves, grass, berries, fruits, and fungi.

Life History

From October to April, box turtles hibernate by burrowing into loose soil, decaying vegetation, and mud. They tend to hibernate in woodlands, on the edge of woodlands, and sometimes near closed canopy wetlands in the forest. Box turtles may return to the same place to hibernate year after year. As soon as they come out of hibernation, box turtles begin feeding and searching for mates.

The breeding season begins in April and may continue through fall. Box turtles usually do not breed until they are about 10 years old. This late maturity is a result of their long lifespan, which can range up to 50 to even over 100 years of age. The females do not have to mate every year to lay eggs as they can store sperm for up

to 4 years. In mid-May to late June, the females will travel from a few feet to more than a mile within their home range to find a location to dig a nest and lay their eggs. The 3 to 8 eggs are covered with dirt and left to be warmed by the sun. During this vulnerable time, skunks, foxes, snakes, crows, and raccoons often raid nests. Sometimes, entire nests are destroyed. If the eggs survive, they will hatch in late summer to early fall (about 2 months after being laid). If they hatch in the fall, the young turtles may spend the winter in the nest and come out the following spring.

As soon as the young turtles hatch, they are on their own and receive no care from the adults. This is a dangerous time for young box turtles because they do not develop the hinge for closing into their shell until they are about 4 to 5 years old. Until then, they cannot entirely retreat into their shells. Raccoons, skunks, foxes, dogs, and some birds will prey on young turtles.

Conservation Concerns

The eastern box turtle was once common throughout the state, mostly in the central Connecticut lowlands. However, its distribution is now spotty, although where found, turtles may be locally abundant. Because of the population decline in Connecticut, the box turtle was added to the state's List of Endangered, Threatened, and Special Concern Species when it was revised in 1998. It is currently listed as a species of special concern. The box turtle also is protected from international trade by the 1994 CITES treaty. It is of conservation concern in all the states where it occurs at its northeastern range limit, which includes southern New England and southeastern New York.

Many states have laws that protect box turtles and prohibit their collection. In Connecticut, eastern box turtles **cannot** be collected from the wild (DEP regulations 26-66-14A). Another regulation (DEP regulations 26-55-3D) "grandfathers" those who have a **box turtle collected before 1998**. This regulation limits possession to a single turtle collected before 1998. These

regulations provide some protection for the turtles, but not enough to combat some of the even bigger threats these animals face. The main threats in Connecticut (and other states) are loss and fragmentation of habitat due to deforestation and spreading suburban development; vehicle strikes on the busy roads that bisect the landscape; and indiscriminate (and now illegal) collection of individuals for pets.

Loss of habitat is probably the greatest threat to turtles. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Adult box turtles are relatively free from predators due to their unique shells. The shell of a box turtle is extremely hard. However, the shell is not hard enough to survive being run over by a vehicle. Roads bisecting turtle habitat can seriously deplete the local population. Most vehicle fatalities are pregnant females searching for a nest site.

How You Can Help

- *Leave turtles in the wild. They should never be kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed reduces the ability of the population to maintain itself.*
- *Never release a captive turtle into the wild. It probably would not survive, may not be native to the area, and could introduce diseases to wild populations.*
- *Do not disturb turtles nesting in yards or gardens.*
- *As you drive, watch out for turtles crossing the road. Turtles found crossing roads in June and July are often pregnant females and they should be helped on their way and not collected. Without creating a traffic hazard or compromising safety, drivers are encouraged to avoid running over turtles that are crossing roads. Also, still keeping safety precautions in mind, you may elect to pick up turtles from the road and move them onto the side they are headed. Never relocate a turtle to another area that is far from where you found it.*
- *Learn more about turtles and their conservation concerns. Spread the word to others on how they can help Connecticut's box turtle population.*



State of Connecticut
Department of Environmental Protection
Bureau of Natural Resources
Wildlife Division
www.ct.gov/dep



The production of this Endangered and Threatened Species Fact Sheet is made possible by donations to the Connecticut Endangered Species/Wildlife Income Tax Checkoff Fund.

NOTICE TO CONTRACTOR - TRAFFIC SIGNALS

The Contractor is hereby notified that certain conditions pertaining to the installation of new signals and maintenance of traffic signal operations are required when relevant, as part of this contract.

Qualified/Unqualified Workers

U.S. Department of Labor

Occupational Safety & Health Administration (OSHA) www.osha.gov

Part Number 1910

Part Title Occupational Safety & Health Administration

Subpart S

Subpart Title Electrical

Standard Number 1910.333

Title Selection and use of work practices

Completion of this project will require Contractor employees to be near overhead utility lines. All workers and their activities when near utility lines shall comply with the above OSHA regulations. In general, unqualified workers are not allowed within 10 feet of overhead, energized lines. It is the contractor's responsibility to ensure that workers in this area are qualified in accordance with OSHA regulations.

The contractor will be held liable for all damage to existing equipment resulting from his or his subcontractor's actions. A credit will be deducted from monies due the Contractor for all maintenance calls responded to by Department of Transportation personnel.

The 30 Day Test on traffic control equipment, as specified in Section 10.00, Article 10.00.10 - TESTS, will not begin until the items listed below are delivered to the Department of Transportation, Traffic Signal Lab in Rocky Hill.

Five (5) sets of cabinet wiring diagrams and one electronic PDF file copy to be sent to DOT.TrafficElectrical@ct.gov. Leave one set in the controller cabinet.

NOTICE TO CONTRACTOR - POTENTIAL MODIFIED AWARD SCHEDULE

The contractor is hereby given notice that this contract may not be awarded until all Federal and State financial approvals have been received. If all financial approvals are not received, this contract may be withdrawn and re-advertised at the direction of the Municipality, in consultation with the State. This shall not be the basis for any claims by any bidder.

**NOTICE TO CONTRACTOR – GLOBAL POSITIONING SYSTEM (GPS)
COORDINATES FOR SIGNS**

The Contractor shall obtain and provide to the Engineer sign installation data, including Global Positioning System (GPS) latitude and longitude coordinates, for all new State owned and maintained signs. The Engineer shall forward the sign data to the Division of Traffic Engineering for upload into the Highway Sign Inventory and Maintenance Management Program (SIMS). Sign data submissions or questions relating to SIMS or GPS shall be sent to DOT-SignInventory@ct.gov. Refer to the special provision for Section 12.00 General Clauses For Highway Signing.

**NOTICE TO CONTRACTOR – CONTRACTOR TRAINING
REQUIREMENT FOR 10-HOUR OSHA CONSTRUCTION SAFETY AND
HEALTH COURSE**

In accordance with Connecticut General Statute 31-53b and Public Act No. 08-83, the Contractor is required to furnish proof that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53, has completed a course of at least ten hours in duration in construction safety and health approved by the Federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

Proof of compliance with the provisions of the statute shall consist of a student course completion card issued by the federal Occupational Safety and Health Administration, or other such proof as deemed appropriate by the Commissioner of the Connecticut Department of Labor, dated no earlier than five years prior to the commencement of the project. Each employer shall affix a copy of the construction safety course completion card for each applicable employee to the first certified payroll submitted to the Department of Transportation on which the employee's name first appears.

Any employee required to complete a construction safety and health course as required that has not completed the course, shall have a maximum of fourteen (14) days to complete the course. If the employee has not been brought into compliance, they shall be removed from the project until such time as they have completed the required training.

This section does not apply to employees of public service companies, as defined in section 16-1 of the 2008 supplement to the General Statutes, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

The internet website for the federal Occupational Safety and Health Training Institute is <http://www.osha.gov/fso/ote/training/edcenters>.

Additional information regarding this statute can be found at the Connecticut Department of Labor website, <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>.

Any costs associated with this notice shall be included in the general cost of the contract. In addition, there shall be no time granted to the contractor for compliance with this notice. The contractor's compliance with this notice and any associated regulations shall not be grounds for claims as outlined in Section 1.11 – "Claims".

NOTICE TO CONTRACTOR - VEHICLE EMISSIONS

All motor vehicles and/or construction equipment (both on-highway and non-road) shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety.

The contractor shall establish staging zones for vehicles that are waiting to load or unload at the contract area. Such zones shall be located where the emissions from the vehicles will have minimum impact on abutters and the general public.

Idling of delivery and/or dump trucks, or other equipment shall not be permitted during periods of non-active use, and it should be limited to three minutes in accordance with the Regulations of Connecticut State Agencies Section 22a-174-18(b)(3)(c):

No mobile source engine shall be allowed “to operate for more than three (3) consecutive minutes when the mobile source is not in motion, except as follows:

- (i) When a mobile source is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control,
- (ii) When it is necessary to operate defrosting, heating or cooling equipment to ensure the safety or health of the driver or passengers,
- (iii) When it is necessary to operate auxiliary equipment that is located in or on the mobile source to accomplish the intended use of the mobile source,
- (iv) To bring the mobile source to the manufacturer’s recommended operating temperature,
- (v) When the outdoor temperature is below twenty degrees Fahrenheit (20 degrees F),
- (vi) When the mobile source is undergoing maintenance that requires such mobile source be operated for more than three (3) consecutive minutes, or
- (vii) When a mobile source is in queue to be inspected by U.S. military personnel prior to gaining access to a U.S. military installation.”

All work shall be conducted to ensure that no harmful effects are caused to adjacent sensitive receptors. Sensitive receptors include but are not limited to hospitals, schools, daycare facilities, elderly housing and convalescent facilities. Engine exhaust shall be located away from fresh air intakes, air conditioners, and windows.

A Vehicle Emissions Mitigation plan will be required for areas where extensive work will be performed in close proximity (less than 50 feet (15 meters)) to sensitive receptors. No work will proceed until a sequence of construction and a Vehicle Emissions Mitigation plan is submitted in writing to the Engineer for review and all comments are addressed prior to the commencement of any extensive construction work in close proximity (less than 50 feet (15 meters)) to sensitive receptors. The mitigation plan must address the control of vehicle emissions from all vehicles and construction equipment.

If any equipment is found to be in non-compliance with this specification, the contractor will be issued a Notice of Non-Compliance and given a 24 hour period in which to bring the equipment into compliance or remove it from the project. If the contractor then does not comply, the Engineer shall withhold all payments for the work performed on any item(s) on which the non-conforming equipment was utilized for the time period in which the equipment was out of compliance.

Any costs associated with this "Vehicle Emissions" notice shall be included in the general cost of the contract. In addition, there shall be no time granted to the contractor for compliance with this notice. The contractor's compliance with this notice and any associated regulations shall not be grounds for claims as outlined in Section 1.11 – "Claims".

**NOTICE TO CONTRACTOR – COORDINATION WITH CTDOT
PROJECT 117-165**

The State of Connecticut Department of Transportation (CTDOT) will be replacing the Depot Road Bridge and reconstructing portions of Depot Road under CTDOT Project 117-165. The Contractor shall schedule his operations in such a manner as to minimize interference with this project. The proposed locations of curbs, sidewalks, sidewalk ramps, crosswalks and other work associated with CTDOT Project 117-165 in the project area are shown on the roadway plans for information purposes only and are subject to change.

The Contractor shall consider in his bid any inconvenience and work required to coordinate his operations with CTDOT Project 117-165. The Contractor shall coordinate with the CTDOT and the contractor performing work under CTDOT Project 117-165 to accommodate his schedule with the schedule for bridge construction. Any inconvenience or delay that may result from the Depot Road Bridge and roadway work shall be included in the contract bid for the work.

The contractor shall notify the CTDOT District 4 Office of Construction a minimum of two (2) weeks prior to the start of the road construction work that could affect CTDOT Project 117-165.

NOTICE TO CONTRACTOR - PROTECTION OF EXISTING FACILITIES

The Contractor is hereby notified that caution should be taken during clearing and grubbing operations, earthwork and site construction, and grading near existing concrete walls, masonry walls, curbing, sidewalks, driveways, landscaping, signs, etc. that are adjacent to the project site.

Excavation and work of any type shall be accomplished in such a manner that will not disturb any existing facility.

It shall be the Contractor's sole responsibility for any damage incurred during construction. All costs related to the repair shall be borne by the Contractor at no additional cost to the Town.

The Contractor shall consider, in his bid, any inconvenience and work required to safeguard the existing facilities.

**NOTICE TO CONTRACTOR - SECTION 9.49 FURNISHING, PLANTING,
AND MULCHING TREES, SHRUBS, VINES, AND GROUND COVER
PLANTS**

The Contractor is hereby notified that Section 9.49 of the Standard Specifications in Form 818 has been revised as follows:

1. The Contractor must secure an Encroachment Permit to work in the plantings area to satisfy the two year warranty requirements.
2. The Encroachment Permit requires a Permit Bond.
3. The Contractor is responsible for the Two-Year Establishment Period, 2 years from the date of final acceptance to the satisfactory completion of the planting activities.
4. The Contractor shall secure a Permit Bond in the amount of 10% of the sum of all landscaping costs, along with an Encroachment Permit from the Department in order to guarantee the Two-Year Establishment Period.

See Article 9.49.03-15 for more information.

SECTION 1.05 - CONTROL OF THE WORK

Replace Article 1.05.02 with the following:

1.05.02—Plans, Working Drawings, Shop Drawings, Product Data, Submittal Preparation and Processing - Review Timeframes, Municipality’s Action:

1. Plans: The plans prepared by the Municipality show the details necessary to give a comprehensive idea of the construction contemplated under the Contract. The plans will generally show location, character, dimensions, and details necessary to complete the Project. If the plans do not show complete details, they will show the necessary dimensions and details, which when used along with the other Contract documents, will enable the Contractor to prepare Working Drawings, Shop Drawings or Product Data necessary to complete the Project.

2. Working Drawings: When required by the Contract or when ordered to do so by the Engineer, the Contractor shall prepare and submit the Working Drawings, signed, sealed and dated by a qualified Professional Engineer licensed to practice in the State of Connecticut, for review. The Working Drawings shall be submitted sufficiently in advance of the work detailed, to allow for their review in accordance with the requirements specified in 1.05.02-5 (including any necessary revisions, resubmittal, and final review). There will be no direct payment for furnishing any Working Drawings, procedures or supporting calculations, but the cost thereof shall be considered as included in the general cost of the work.

The Contractor is only required to deliver paper copies that have been stamped with “No Exceptions Noted” or “Exceptions as Noted.” Guidance to the Contractor for the number of properly sized paper copies will be provided by the Municipality.

All Working Drawing submission documents shall conform to the following requirements:

A. Drawings:

- i. Delivered in a single multi-page PDF file.
- ii. Shall be sized ANSI D (34 inches × 22 inches).
- iii. Contain a border, title block and a rectangular box, 2.25 inches wide × 1.75 inches high, in the lower right hand corner for the Municipality’s stamp.
- iv. Text height and width shall be 0.125 inch.
- v. All letter characters shall be uppercase.
- vi. Shall be searchable.
- vii. Shall be black and white.
- viii. Cover Page - shall be digitally signed by the Contractor’s Professional Engineer.
- ix. All pages shall include a watermark of the Professional Engineer’s stamp in a common area.

B. Calculations:

- i. Delivered in a single PDF file
- ii. Shall be sized ANSI A (8.5 inches × 11 inches).

- iii. Cover Page shall be digitally signed by the Contractor's Professional Engineer.
- C. Supporting Documentation:
- i. Delivered as an independent single PDF file
 - ii. Shall be sized ANSI A (8.5 inches × 11 inches).
- a. Working Drawings for Permanent Construction: The Contractor shall supply to the Municipality certificate of insurance in accordance with 1.03.07 at the time that the Working Drawings for the Project are submitted.
- The Contractor's designer, who prepares the working drawings, shall secure and maintain at no direct cost to the State a Professional Liability Insurance Policy for errors and omissions in the minimum amount of \$2,000,000 per error or omission. The Contractor's designer may elect to obtain a policy containing a maximum \$250,000 deductible clause, but if the Contractor's designer should obtain a policy containing such a clause, they shall be liable to the extent of at least the deductible amount. The Contractor's designer shall obtain the appropriate and proper endorsement of its Professional Liability Policy to cover the indemnification clause in this Contract, as the same relates to negligent acts, errors or omissions in the Project work performed by them. The Contractor's designer shall continue this liability insurance coverage for a period of
- (i) 3 years from the date of acceptance of the work by the Engineer, as evidenced by a State of Connecticut, Department of Transportation form entitled "Certificate of Acceptance of Work," issued to the Contractor; or
 - (ii) 3 years after the termination of the Contract, whichever is earlier, subject to the continued commercial availability of such insurance.
- b. Working Drawings for Temporary Construction: The Contractor shall submit drawings, calculations, procedures and other supporting data to the Municipality in accordance with this Specification, with the exception of requirements defined under a. Working Drawings for Permanent Construction.

3. Shop Drawings: When required by the Contract, or when ordered to do so by the Engineer, the Contractor shall prepare and deliver Shop Drawings to the Municipality for review.

Shop Drawings shall be submitted sufficiently in advance of the work detailed, to allow for their review in accordance with the requirements specified in 1.05.02-5 (including any necessary revisions, resubmittal, and final review). There will be no direct payment for furnishing any Shop Drawings but the cost thereof shall be considered as included in the general cost of the work.

The Contractor is only required to deliver paper copies that have been stamped with "No Exceptions Noted" or "Exceptions as Noted." Guidance to the Contractor for the number of properly sized paper copies will be provided by the Municipality.

Shop Drawing submission documents shall conform to the following requirements:

- A. Delivered in a single multi-page PDF file.

- B. Shall be sized ANSI D (34 inches × 22 inches).
- C. Contain a border, title block and a rectangular box, 2.25 inches wide × 1.75 inches high, in the lower right hand corner for the Municipality’s stamp.
- D. Text height and width shall be 0.125 inch.
- E. All letter characters shall be uppercase.
- F. Shall be searchable.
- G. Shall be black and white.

4. Product Data: When required by the Contract, or when ordered to do so by the Engineer, the Contractor shall prepare and deliver Product Data to the Department for review.

Product Data shall be submitted sufficiently in advance of the work detailed, to allow for their review in accordance with the requirements specified in 1.05.02-5 (including any necessary revisions, resubmittal, and final review). There will be no direct payment for furnishing any Product Data but the cost thereof shall be considered as included in the general cost of the work.

The Contractor shall submit the Product Data in a single submittal for each element of construction.

The Contractor shall mark each copy of the Product Data submittal to show applicable choices and options. Where Product Data includes information on several products that are not required, copies shall be marked to indicate the applicable information. Product Data shall include the following information and confirmation of conformance with the Contract to the extent applicable: manufacturer’s printed recommendations, compliance with recognized trade association standards, compliance with recognized testing agency standards, application of testing agency labels and seals, notation of coordination requirements, Contract item number, and any other information required by the individual Contract provisions.

The Contractor is only required to deliver paper copies that have been stamped with “No Exceptions Noted” or “Exceptions as Noted.” Guidance to the Contractor for the number of properly sized paper copies will be provided by the Municipality.

Product Data submission documents shall conform to the following requirements:

- A. Delivered in a single PDF file
- B. Shall be sized ANSI A (8.5 inches × 11 inches).
- C. Marked to indicate applicable choices and options.
- D. Where non-applicable information and products are included, notations shall be made to clearly delineate applicable from non-applicable information.

Digital PDF documents for the traffic signal items shall be sent via email to DOT.TrafficElectrical@ct.gov

5. Submittal Preparation and Processing – Review Timeframes: If the Municipality deems a submittal incomplete or unacceptable because not all the required documents were

attached, documents are incomplete, or are in the incorrect format, the Municipality will send the submittal back to the Contractor before reviewing. When a submittal is sent back as incomplete, the associated documents have not been reviewed and the review process and any associated timeframe requirements have not begun.

The Contractor shall allow 30 calendar days for submittal review by the Municipality, from the date receipt is acknowledged by the Municipality. For any submittals stamped with "Revise and Resubmit" or "Rejected," the Municipality is allowed an additional 20 calendar days for review of any resubmissions.

An extension of Contract time will not be authorized due to the Contractor's failure to transmit submittals sufficiently in advance of the work to permit processing.

The furnishing of Shop Drawings, Working Drawings or Product Data, or any comments or suggestions by the Designer or Engineer concerning Shop Drawings, Working Drawings or Product Data, shall not relieve the Contractor of any of its responsibility for claims by the State or by third parties, as per 1.07.10.

The furnishing of the Shop Drawings, Working Drawings and Product Data shall not serve to relieve the Contractor of any part of its responsibility for the safety or the successful completion of the Project construction.

6. Municipality's Action: The Municipality will review each submittal, mark each with a self-explanatory action stamp, and return the stamped submittal promptly to the Contractor. The Contractor shall not proceed with the part of the Project covered by the submittal until the submittal is marked "No Exceptions Noted" or "Exceptions as Noted" by the Municipality. The Contractor shall retain sole responsibility for compliance with all Contract requirements. The stamp will be marked as follows to indicate the action taken:

- a. If submittals are marked "No Exceptions Noted," the Designer or Engineer has not observed any statement or feature that appears to deviate from the Contract requirements. This disposition is contingent on being able to execute any manufacturer's written warranty in compliance with the Contract provisions.
- b. If submittals are marked "Exceptions as Noted," the considerations or changes noted by the Municipality's Action are necessary for the submittal to comply with Contract requirements. The Contractor shall review the required changes and inform the Municipality if they feel the changes violate a provision of the Contract or would lessen the warranty coverage.
- c. If submittals are marked "Revise and Resubmit," the Contractor shall revise the submittals to address the deficiencies or provide additional information as noted by the Municipality. The Contractor shall allow an additional review period as specified in 1.05.02-5.
- d. If submittals are marked "Rejected," the Contractor shall prepare and submit a new submittal in accordance with the Municipality's notations. The resubmissions require an additional review and determination by the Municipality. The Contractor shall allow an additional review period as specified in 1.05.02-5.

SECTION 1.06 CONTROL OF MATERIALS

Article 1.06.01 - Source of Supply and Quality:

Add the following:

Traffic Signal Items:

For the following traffic signal items the contractor shall submit a complete description of the item, shop drawings, product data sheets and other descriptive literature which completely illustrates such items presented for formal review. Such review shall not change the requirements for a certified test report and materials certificate as may be called for. All documents shall be grouped into one separate file for each group of items as indicated by the Roman numerals below (for example, one pdf file for all of the pedestal items). The documents for all of the traffic signal items shall be submitted at one time, unless otherwise allowed by the engineer.

- I. 10080XX – Rigid Metal Conduit
- II. 11020XX – Aluminum Pedestals
- III. 11050XXA – Traffic Signals, Span Mounted - LEDs, Housings and Hardware
- IV. 11060XXA – Pedestrian Signals - LEDs, Housings, and Hardware
11070XXA – Accessible Pedestrian Signal & Detector - Button, Housings & Sign (Type)
- V. 1112285A – Thermal Video Detector Assembly
- VI. 11122XXA – Vehicle Detection - Camera Assembly, Processor and Monitor
- VII. 1113XXXXA – Cable - Control Cable, CAT6, VC

SECTION 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES

Article 1.07.13 - Contractor's Responsibility for Adjacent Property, Facilities and Services is supplemented as follows:

The following company and representative shall be contacted by the Contractor to coordinate the protection of their utilities on this project 30 days prior to the start of any work on this project involving their utilities:

Mr. Mark Russo
District 4 Electrical Supervisor
Department of Transportation
Southbury, Connecticut
(203) 264-9590

Mr. Chad Raetz
Comcast of Connecticut
222 New Park Drive
Berlin, CT 06037
(518) 361-7234

Mr. Mark Bonjuklian
Eversource – Electric Distribution
9 Tindall Avenue
Norwalk, CT 06851
(203) 845-3456

Ms. Susan J. Bellion
Eversource – Electric Transmission
56 Prospect Street
Hartford, CT 06103
(860) 728-4628

Ms. Lynne Delucia
Frontier Communications
1441 North Colony Road
Meriden, CT 06450
(203) 238-5000

Mr. David Hatfield
Eversource – Gas Distribution
107 Selden Street, Mail Stop NUE2
Berlin, CT 06037
(203) 592-3494

Mr. David B. Willard
Metro-North Commuter Railroad Company
525 Water Street, 3rd Floor, Bridgeport R.R.
Station
Bridgeport, CT 06604-4315
(203) 337-3606

Mr. Carlos Vizcarrondo
Aquarion Water Company of Connecticut
600 Lindley Street
Bridgeport, CT 06606
(203) 337-5950

Mr. Eric Clark
Crown Castle Fiber, LLC fka, Lighttower Fiber
Networks I, LLC
Operations Manager
1781 Highland Avenue, Suite 102
Cheshire, CT 06410
Office : (203) 649-3904
Mobile : (860) 861-8311

SECTION 1.08 - PROSECUTION AND PROGRESS

Article 1.08.03 - Prosecution of Work:

Add the following:

The Contractor shall stake the limits of the concrete sidewalks and ramps in conjunction with staking the locations of foundations to ensure that pedestrian push buttons will be located appropriately and will be accessible from a landing area.

The Contractor will not be allowed to install traffic signal or pedestrian heads until the controllers are on hand and ready for installation. Once installation of this equipment commences, the Contractor shall complete this work in a most expeditious manner.

The Contractor shall notify the project engineer on construction projects, or the district permit agent on permit jobs, when all traffic signal work is completed. This will include all work at signalized intersections including loop replacements, adjusting existing traffic signals or any relocation work including handholes. The project engineer or district permit agent will notify the Division of Traffic Engineering to coordinate a field inspection of all work. Refer to Section 10.00 – General Clauses For Highway Illumination And Traffic Signal Projects, Article 10.00.10 and corresponding special provision.

SECTION 1.08 - PROSECUTION AND PROGRESS

Article 1.08.04 - Limitation of Operations - Add the following:

In order to provide for traffic operations as outlined in the Special Provision "Maintenance and Protection of Traffic," the Contractor will not be permitted to perform any work which will interfere with the described traffic operations on all project roadways as follows:

Secondary Roads

Town of Ridgefield – U.S. Route 7 at Depot Road & Route 102 (Intersection #117-202)

Monday through Friday between 6:00 a.m. and 9:00 a.m. & between 3:00 p.m. and 6:00 p.m.
Saturday and Sunday between 10:00 a.m. and 6:00 p.m.

Additional Restrictions:

- A. The Contractor shall not be allowed to close U.S. Route 7 and Route 102 and detour traffic.

Additional Lane Closure Restrictions

It is anticipated that work on adjacent projects will be ongoing simultaneously with this project. The Contractor shall be aware of those projects and anticipate that coordination will be required to maintain proper traffic flow at all times on all project roadways, in a manner consistent with these specifications and acceptable to the Engineer.

The Contractor will not be allowed to perform any work that will interfere with traffic operations on a roadway when traffic operations are being restricted on that same roadway, unless there is at least a one mile clear area length where the entire roadway is open to traffic or the closures have been coordinated and are acceptable to the Engineer. The one mile clear area length shall be measured from the end of the first work area to the beginning of the signing pattern for the next work area.

SECTION 1.10 ENVIRONMENTAL COMPLIANCE

In Article 1.10.03-Water Pollution Control: REQUIRED BEST MANAGEMENT PRACTICES

Add the following after Required Best Management Practice Number 13:

14. The Contractor is hereby notified that the State listed species of Special Concern eastern box turtle (*Terrapene carolina carolina*), is present within the Project limits. In Connecticut, this terrestrial turtle lives in a variety of habitats, including woodlands, field edges, thickets, marshes, bogs, and stream banks. Typically however, eastern box turtles are found in well-drained forest bottomlands and open deciduous forests. They will use wetland areas at various times during the season. During the hottest part of a summer day, they will wander to find springs and seepages where they can burrow into the moist soil. Eastern box turtles overwinter in upland forest, typically covered by leaf litter or woody debris. As temperatures drop, the turtles burrow down into soft ground.

All construction activities taking place within the Project limits will need to be coordinated with the Town of Ridgefield through the Engineer. At least 10 days prior to the commencement of any construction activities, the Contractor shall, through the Engineer, arrange for a qualified herpetologist to meet and discuss proper protocol for maintaining environmental commitments made for the protection of this species and habitat. The Town of Ridgefield will provide oversight through the Engineer to ensure that the following protocols are followed and maintained during the course of the Project.

For any work done during the eastern box turtle's active period (April 1 to October 31) the Department will require the following precautionary measures to protect the eastern box turtle and eastern box turtle habitat:

- a. All areas within the Project limits must be surveyed and cleared of any turtles immediately prior to the commencement of initial clearing and grubbing activities.
- b. All construction personnel working within eastern box turtle habitat must be apprised of the species description and the possible presence of this listed species.
- c. Exclusionary practices will be required in order to prevent any eastern box turtle access to construction areas. These measures will need to be installed at the limits of disturbance as shown on the plans.
- d. Exclusionary fencing shall be at least 20" tall and must be secured to and remain in contact with the ground. It shall be regularly inspected / maintained to prevent any gaps or openings at ground level. Standard silt fence is adequate; fencing with netting shall not be used.

- e. The Contractor must search the work area each morning for the presence of this listed species prior to any work being done.
- f. Any eastern box turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and the Engineer shall be immediately informed in order to contact the herpetologist with the location.
- g. All staging and storage areas in the vicinity of turtle habitat, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed by and receive written approval from the herpetologist through the Engineer.
- h. No heavy machinery or vehicles may be parked in any unapproved eastern box turtle habitat.
- i. Exclusionary fencing shall be removed when it is no longer needed, and silt fence shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.

Work may take place during the eastern box turtle's inactive (hibernation) period (November 1 to March 31) with the following additional precautionary measure:

- a. Exclusionary fencing must be installed and the area inspected for turtles by the Engineer or Engineer's approved representative prior to October 1.

These practices will be applied to the entire Project unless a sketch is attached, which identifies specific areas of concern.

This species is protected by State laws, which prohibit killing, harming, taking, or keeping them in your possession. Photographs and the laws protecting eastern box turtles shall be posted in the Contractor's and DOT field offices (species ID sheets will be provided by the herpetologist).

SECTION 9.49 FURNISHING, PLANTING, AND MULCHING TREES, SHRUBS, VINES, AND GROUND COVER PLANTS

Article 9.49.03 – Construction Methods

In the 15th paragraph, One-Year Establishment Period, replace the entire paragraph with the following, and replace the title with “Two Year Establishment Period”:

All plant material, including trees, shrubs, vines, ground cover, wildflower establishment and conservation seeding shall be subject to a two-year establishment period. During this time, the Contractor shall use currently accepted horticultural practices to keep all plant material installed in a healthy, vigorous growing condition at the date of final acceptance. The date of final acceptance shall be 2 full calendar years following the satisfactory completion of the planting activities as confirmed by the Engineer. The Contractor shall secure a Permit Bond in the amount of 10% of the total landscaping cost, along with an Encroachment Permit from the Department in order to guarantee the Two-Year Establishment Period.

The Permit Bond shall be provided to the Department at the completion and acceptance of all planting. An intermediate and final inspection will be held 1 and 2 years, respectively, from the date of installation, with the Contractor, Engineer, and Landscape Designer in attendance, to determine the acceptability of the plant establishment. An inventory of losses and rejected materials will be made by the Department and corrective clean up measures will be determined. After the Contractor completes all corrective actions, the DOT Encroachment Permit and Permit Bond will be released by the Department.

SECTION 10.00 - GENERAL CLAUSES FOR HIGHWAY ILLUMINATION AND TRAFFIC SIGNAL PROJECTS

Article 10.00.03 – Plans:

In the first paragraph, replace the 2nd, 3rd, and 4th sentences with the following:

The Contractor shall digitally mark, in red, any changes on the plan(s) using a pdf program. Markups shall also include field-obtained GPS coordinates for installed span pole, mast arm assembly, controller, and light standard locations.

- The GPS technology used should be able to provide coordinates that are within 12” of accuracy.
- Coordinates provided are to be as accurate as possible for locations where satellite coverage is compromised by tree canopies, buildings, etc.

The Contractor shall submit the digital pdf file(s) to the Engineer and to DOT.TrafficElectrical@ct.gov, for Traffic Signals, prior to requesting the Functional Inspection.

Also prior to requesting the Functional Inspection, the Contractor shall deliver to the Engineer the following:

In item no. 1, replace “Four (4)” with “Digital PDF Files and Five (5)” [paper prints of schematics and wiring diagrams...]. In item no. 1, add “ Send a digital PDF copy to DOT.TrafficElectrical@ct.gov”

After item no. 3, add an item no. 4 as the following:

4. Digital field pictures, in .JPG format and labeled appropriately, of the following constructed items:
 - a. Signals heads facing each approach. The pictures are to be taken along each intersection approach in order to observe the relation between the signal faces and the approach centerline, lane line(s), and edge line.
 - b. Inside of hand holes
 - c. Inside of the controller cabinet
 - d. Traffic foundations (Pedestals)
 - e. Video detector locations and mountings
 - f. Screen shots of detection zones

Article 10.00.10 Section 2. Subsection a) After Part 3, add the following:

4. **360-Degree Video Detection System Tests:** The following tests shall be performed on all traffic signals with 360-Degree Video Detection Systems. The test results shall be recorded and submitted to the Engineer prior to the functional inspection of the traffic signal. Refer to

the "Quality Best Practices" attachment to the special provision for Item # 1112286A - 360 DEGREE VIDEO DETECTION PROCESSOR:

- a) **Cabinet Grounding Test:** The cabinet ground shall be tested with a clamp-on ground meter in accordance with the detection system manufacturer's recommendations to ensure a ground reading of a maximum of 25 Ohms. The results of this test shall be recorded.
- b) **AC Power Test:** The AC outlet for the processor shall be checked with a digital voltmeter according to the detection system manufacturer's recommendations to ensure that all three connections for the outlet are properly connected and to verify that the AC voltage from the line to neutral and the line to ground is 120VAC. The results of this test shall be recorded.
- c) **Ethernet Cable Test:** Each Ethernet cable shall be tested with a digital Ethernet cable tester in accordance with the detection system manufacturer's recommendations to ensure the cable length does not exceed 300-ft and ensure a Real World Certification of at least 100 MB. The results of this test shall be recorded.
- d) **Drain Wire Resistance Test:** Each Ethernet cable drain wire shall be checked with a digital voltmeter in accordance with detection system manufacturer's recommendations to ensure that the resistance between the drain wire grounding post and the cabinet ground rod equals 0 Ohms. The results of this test shall be recorded.

Article 10.00.10 Section 2. Subsection b) Part 3. Functional Inspection:

In the first paragraph, after the 2nd sentence, add the following:

Prior to the Functional Inspection, the Contractor shall verify with the CTDOT Traffic Signal Lab that each detection camera is operating properly. In instances where the existing traffic control equipment is being revised or replaced, the verification with the CTDOT Traffic Signal Lab shall be prior to the required Preliminary Functional Test. The Contractor shall have a bucket truck with crew on site during the Functional Inspection to make any necessary aerial signal and detection equipment adjustments as directed by the Engineer.

After the fourth paragraph, add the following:

Upon the successful completion of the Functional Inspection and once all corrections and adjustments resulting from the Functional Inspection are completed, the Contractor shall update as-built plans and pictures to reflect any changes made and submit as required in Section 10.00.03 within 7 days of the completion of the 30-day test.

Article 10.00.12 - Negotiations with utility company: Add the following:

The Contractor shall give notice to utility companies a minimum of 30 days prior to required work or services to the utility company. Refer to Section 1.07 – Legal Relations and Responsibilities for the list of utility companies and representatives the contractor shall use.

The Contractor shall perform all work in conformance with Rules and Regulations of Public Utility Regulatory Authority (PURA) concerning Traffic Signals attached to Public Service Company Poles. The Contractor is cautioned that there may be energized wires in the vicinity of the specified

installations. In addition to ensuring compliance with NESC and OSHA regulations, the Contractor and/or its Sub-Contractors shall coordinate with the appropriate utility company for securing/protecting the site during the installation of traffic signal mast arms, span poles or illumination poles.

SECTION 12.00 – GENERAL CLAUSES FOR HIGHWAY SIGNING

Description:

Work under this item shall conform to the requirements of Section 12.00 supplemented as follows:

12.00.07 – Global Positioning System (GPS) coordinates for signs:

The Contractor shall obtain and provide to the Engineer sign installation data, including Global Positioning System (GPS) latitude and longitude coordinates, for all new permanent State owned and maintained signs (temporary and construction signs are not to be included) installed in the project. The Engineer shall forward the sign data to the Division of Traffic Engineering for upload into the Highway Sign Inventory and Maintenance Management Program (SIMS). Sign data submissions or questions relating to SIMS or GPS shall be sent to DOT-SignInventory@ct.gov.

The horizontal datum is to be set to the State Plane Coordinate System, North American Datum of 1983 (NAD83) in feet. The minimum tolerance must be within 10 feet. The format of the GPS information shall be provided in a Microsoft Office compatible spreadsheet (Excel) file with data for each sign. The record for each sign installed is to be compatible with the anticipated CTDOT Sign Inventory and Management System (CTSIMS). The following format shall be used. However, the data fields noted by “#” are not required for the project submission. These entries will be completed as part of the Traffic Engineering CTSIMS data upload.

The cost of this work shall be included in the cost of the respective sign face – sheet aluminum and sign face – extruded aluminum items. The receipt of this electronic database must be received and accepted by the Engineer prior to final payment for items involving permanent highway signing. The electronic database information shall detail information regarding the sign actually installed by the project.

Field Number	Type	size	Description
1	text	20	Record Number (starting at 1...)
2	text	20	Sign Catalog Number
# 3	text	10	Size Height
# 4	text	10	Size Width
5	text	25	Legend
# 6	text	10	Background Color
# 7	text	10	Copy Color
8	Link	25	Material (see acceptable categories)
9	text	30	Comments if any
# 10	text	20	MUTCD Type
11	text	15	Town

	12	text	5	Route
	13	text	5	Route direction
#	14	text	10	Highway Log Mileage
	15	text	15	Latitude
	16	text	15	Longitude
	17	text	25	Mounting Type
	18	text	25	Reflective Sheeting Type
	19	date	25	Date Installed
	20	text	10	Number of Posts
	21	text	255	Sheeting Manufacturer name and address
	22	text	15	State Project Number (or)
	23	text	15	Encroachment Permit number.
	24	Graphic	*	Sign Picture Graphic.

* Graphics provided shall be representative of the sign supplied and be in color. Graphic formats shall be either JPG or TIFF and provided with a recommended pixel density of 800 x 600. The graphic shall be inserted in the supplied media in field 24 for each sign.

ITEM #0201001A – CLEARING AND GRUBBING

Add the following:

2.01.01—Description: The work under this item shall also include clearing and grubbing of the areas of fill and cut slopes and as directed by the Engineer.

This work shall also include monitoring and removal of Japanese Knotweed within the project limits in accordance with CT Invasive Plans Working Group guidelines, or guidance from similar institutions approved by the Engineer for the duration of the Contract.

ITEM #0202900A – HERPETOLOGIST

Description: This item shall consist of securing the services of a qualified Herpetologist for the Town by the Contractor for conducting education and training sessions, providing key inspections of exclusionary fencing and sweeps for the species of concern and nesting sites, and reporting the finding of the species. This work will be done in compliance with the amended Section 1.10 Environmental Compliance special provision included in the Contract.

Construction Methods: The Contractor shall retain the services of a qualified Herpetologist on behalf of the Town. The Contractor shall use several of the following recommendations outlined below to select the herpetologist and submit the documentation to the Engineer for their review and acceptance:

1. Cover letter and resume.
2. A copy of a bachelor's or masters' degree in Biology. A Master's degree is preferred. The emphasis of the degree shall be on reptiles and amphibians
3. Familiar with Connecticut's reptile and amphibian species, their behaviors, and habitats.
4. Examples of current or past work experiences with reptiles and amphibians. Connecticut work experience is preferred.
5. A copy of a current or past CTDEEP Scientific Collector's (Wildlife) Permit for amphibian/reptile species.
6. Three references.
7. Recommendation statements from other professional herpetological experts.

Upon approval by the Engineer, the Contractor shall submit to the Herpetologist a set of construction plans to become familiar with the Project and scope of work including any special provisions, permits, correspondences regarding the identified species.

The Herpetologist will:

- Attend the Pre-construction Meeting to discuss best management practices for the species.
- Conduct a separate Environmental Meeting with the inspection and Contractor personnel to provide education/training and educational materials (as explained below); provide identification species factsheets and photos.
- Respond to questions/comments that may arise throughout the duration of the Project. Contact information for the Herpetologist will be provided to the Engineer/Inspection staff.
- Conduct a species sweep a day before or the day of clearing and grubbing operations. The Engineer/Inspector will be responsible for notifying the Herpetologist prior to these activities.
- Inspect the exclusionary fencing, which the Contractor has installed immediately after his clearing and grubbing operation to prevent species from entering the work area.
- Provide key sweeps and exclusionary fencing inspections (i.e. following a construction phase change) for species and habitat, and spot checks as requested.

- Provide a pre-winter hibernation sweep (November 1 to March 31) of the watercourse and for any suitable habitat to exclude and avoid possible nesting/hibernation locations and to allow for winter work. Exclusionary fencing must be installed by the Contractor and the area inspected for the species and nesting locations by the Herpetologist prior to October 31.
- Any observations of State/federal listed species as identified for this Project will be reported to CTDEEP with photo-documentation (if possible) and with specific information on the location and disposition of the animal. Species data will be collected by the Inspector that is on-Site and reported to the Herpetologist. The Herpetologist will submit reports within 30 days the observation of the species of concern on this Project at deep.nddbrequest@ct.gov using the standard reporting forms found at the CTDEEP NDDDB Program website. These forms should also include maps and photographs of the observed species of concern.
(http://www.ct.gov/deep/cwp/view.asp?a=2702&q=323460&depNav_GID=1641)

Contractor Education:

At least 10 days prior to the commencement of any construction activities, the Contractor shall, through the Engineer, arrange to meet with the Herpetologist for an environmental/educational session. At this session, the Herpetologist will discuss proper protocols of the species identified for protection, emphasizing the non-aggressive nature of these species, the absence of any need to destroy wildlife that might be encountered and the need to follow precautionary measures as described in Section 1.10 for the specified species. Educational identification species factsheets and photos will be provided by the Herpetologist and must be displayed on the job Site to maintain worker awareness for the duration of the Project.

On a weekly or bi-weekly basis, the Contractor shall submit to the Engineer their scheduled operations in the area of concern. The Engineer will review this schedule and determine if, for any reason cited above, the Herpetologist should be present on Site. The Engineer will estimate the number of Herpetologist hours and inform the Herpetologist when to be on Site. If the Contractor changes or cancels any scheduled construction activity without prior notice for which the Herpetologist was scheduled to be present such that the services of the Herpetologist are no longer required, the Contractor shall be responsible for the payment of any show-up costs for the Herpetologist at no cost to the Project. Exceptions, as approved by the Engineer, may be granted for adverse weather conditions and unforeseeable causes beyond the control and without the fault or negligence of the Contractor.

The Herpetologist will only take direction from the Engineer.

Method of Measurement: This item will be measured for payment by the number of hours of actual Herpetologist's services rendered and approved by the Engineer.

Basis of Payment: Payment for this work will be at the contract price for actual number of hours for “Herpetologist,” and shall include services for construction, educational, and training, meetings; on Site inspections and sweeps; preparation and submittal of all educational materials, reports, correspondences, and all incidental work.

Pay Item
Herpetologist

Pay Unit
hr.

ITEM #0204151A - HANDLING WATER

Description: Work under this item shall consist of designing, furnishing, installing, maintaining, removing and disposing of a temporary water handling system. This may include water-handling-cofferdams (temporary barriers), bypass pipes, bypass pumps/hoses, temporary energy dissipation, sumps, drainage channels, and equipment and work necessary for dewatering.

A temporary water handling system redirects surface water beyond, through, or around the limits of construction to allow work to be done in the dry.

Materials: The materials required for this work shall be as shown on the plans, on the accepted working drawings, or as ordered by the Engineer.

Construction Methods: The Contractor shall prepare and submit written procedures for handling water. Working drawings, in accordance with Article 1.05.02, shall also be prepared and submitted.

The Contractor shall consider stream conditions and water elevations associated with the Site to determine the type of temporary water handling system required to redirect water away from work being performed. The system shall be designed to be compatible with the stage construction and Maintenance and Protection of Traffic, as indicated in the Contract, and shall conform to Section 1.10.

The Contractor shall be responsible for maintenance of the water handling system. If the system becomes damaged or displaced during construction, the system shall be corrected as required.

Unless otherwise provided or directed, all temporary water handling system components shall be removed and disposed of in an acceptable manner when no longer required.

Method of Measurement: The work under this item, being paid on a lump sum basis, will not be measured for payment.

Basis of Payment: This work will be paid for at the Contract lump sum price for “Handling Water” complete and accepted, which price shall include designing (including submittals and working drawings), furnishing, installing, maintaining, removing, and disposing of all temporary water handling system components as are necessary for completion of the work. This price shall include all materials, equipment, tools, labor and work incidental thereto.

A schedule of values for payment shall be submitted to the Engineer for review and comment.

Pay Item	Pay Unit
Handling Water	l.s.

ITEM #0219011A – CATCH BASIN SEDIMENT FILTER

Add the following:

Article 02.19.02 – Material:

Include catch basins inserts. Catch basin insert type to be approved by the Engineer and as detailed in the drawings..

Article 02.19.04 - Method of Measurement:

Add the following:

This work will be measured for payment by the actual number Each of “Catch Basin Sediment Filters” installed and accepted.

Delete the last sentence in the first paragraph and substitute the following:

Replacement systems damaged by the Contractor’s operation or rendered inoperative by any cause as a result of early installation without approval of the Engineer will not be measured for payment.

Article 02.19.05 – Basis of Payment:

Add the following:

Payment for this work will be made at the Contract unit price per Each for “Catch Basin Sediment Filter” complete in place, which price shall include all materials, equipment, tools and labor incidental to the installation, maintenance, replacement, removal and disposal of the system and surplus material. No payment shall be made for the clean out of accumulated sediment.

Pay Item

Catch Basin Sediment Filter

Pay Unit

EA.

ITEM #0604301A – PEDESTRIAN BRIDGE SUPERSTRUCTURE (SITE NO. 1)

Description: Work under this Item, the Contractor shall supply all labor, tools, materials, and equipment necessary to design, manufacturer, deliver and install the 8' wide by 76' long footbridge across the Cooper Pond Brook. Concrete for the pedestrian bridge abutments and footings are specified and paid for under Items #0601062 and #0601064.

The Contractor shall be responsible for obtaining a building permit from the Town of Ridgefield prior to the start of construction. Permit fees will be waived.

The Contractor shall submit for approval, five (5) copies of drawings of the materials and structural details for the footbridge and its components. Before placing orders for any manufactured item or part of structure, he shall also submit five (5) copies, for approval, of detailed lists and descriptions of the various materials and supplies which he proposes to use in the work, and also the names of individuals or companies who propose to furnish or manufacture the same.

Design Criteria: The footbridge shall be 8' wide (between handrails) with a total length of 76', and railings minimum 42" high on each side. The footbridge shall be designed for a uniform live load of 90 lbs. per square foot with no deduction. The bridge shall meet ADA requirements. The bridge shall also be designed to withstand a moving vehicle load of 10,000 pounds, a wind load of 35 pounds per square foot, and a lateral water load based on the 100-year design storm and hydraulics data as shown on the plans. All bearings shall be anchored to the abutment pedestals, and adjustable mounting plates and Teflon bearings, or other approved means, shall be provided to allow for thermal expansion over a range of 120°F. The pedestrian bridge shall be a prefabricated steel "Pratt Style" truss superstructure type bridge as manufactured by Contech Engineered Solutions, LLC, by Bridge Brothers, Inc., or approved equal.

Materials: Bridge shall be fabricated from high-strength, self-weathering, low allow, atmospheric corrosion-resistant ASTM A606 Type 4 steel with a minimum yield stress of 50,000 psi. Material thickness and design shall be fully engineered for the length and loads specified. The minimum thickness for structural members shall be 3/16".

Decking material shall be solid composite wood decking designed to support a uniform load of not less than 150 lbs. per square foot with a maximum deflection of 1/150 of the span. The decking material shall be securely attached to the footbridge floor beams. Cover plates shall be provided at the ends of the bridge to cover the space between the decking and the abutments.

Footbridge shall be provided with 42" minimum high safety railing on both sides of the bridge for the entire length. The railings shall be continuous on the inside of the truss with vertical pickets with a maximum opening of 4 inches.

Construction Methods: All welding shall be in accordance with the requirements of the American Welding Society.

All exposed members shall have mill scale removed by sand blasting.

Erection: The bridge shall be installed in strict accordance with the manufacturer's recommendations. All mounting hardware necessary to anchor the bridge shall be furnished and installed by the Contractor.

Method of Measurement: This work shall be at the Contract lump sum price for the completion of all work specified.

Basis of Payment: This work will be paid for at the Contract lump sum price for the " Pedestrian Bridge Superstructure (Site No. 1)" which price shall include all material, equipment and labor incidental to completion of this item.

Concrete for the pedestrian bridge abutments and footings are specified and paid for under Items #0601062 and #0601064.

Pay Item
Pedestrian Bridge Superstructure (Site No. 1)

Pay Unit
L.S.

ITEM #0913960A – PROTECTIVE FENCE - CHAIN LINK (BRIDGE)

Description: Work under this item shall consist of furnishing and installing chain link fence on top of the wingwall in accordance with the details shown on the plans and in conformance with these specifications or as directed by the Engineer in the field.

Materials: Materials for this work shall be as specified on the plans and shall conform to the applicable requirements of Article M.10.05 of the Department Standard Specification.

The metal posts and rails shall conform to the requirements of ASTM A53, Types E or S Grade B.

All components shall be polyvinyl chloride coated except for the anchor bolts, nuts and washers.

The fabric shall be a black Poly Vinyl Chloride (PVC) - coated steel chain link type, conforming to the specifications of ASTM F668, Class 2b, thermally fused and bonded. The #9 gage core wire shall be galvanized, PVC-coated, then woven to create a continuous fabric having a two inch mesh, knuckled at both top and bottom. The PVC coating shall be the color black as described in ASTM F934.

Construction Methods: The Contractor shall submit shop drawings to the Engineer for review and approval prior to beginning installation. Shop drawings shall include but not be limited to the following information: a layout plan showing all post spacings and wingwall joints, all fence and attachment details, materials list, and material designations. The bridge wingwall shall be field measured by Contractor *after they are rebuilt, and prior to fence fabrication*, to verify/adjust final fence fabric and post spacing configurations.

All welding shall conform to the applicable requirements of Subarticle 6.03.03-3c of the Department's Standard Specification. Welding shall be performed prior to coating with Polyvinyl Chloride Plastic.

Posts shall be located along the parapet as indicated on the approved shop drawings. Core vertical holes in the top of the concrete wingwall and epoxy grout posts. Post shall be vertically plumb after grout is cured.

All panels shall be braced with horizontal rails. Rails shall be securely fastened to the post by connection clamps, as shown on the plans. Tension wires shall be located within the curved panel portion, as shown on the plans. Care shall be taken to minimize any snag points (i.e., cut fencing links, saw cut burrs, etc.) to the satisfaction of the Engineer.

The fabric shall be stretched between posts and secured with stretcher bar bands. The fabric shall be fastened to intermediate posts and rails with PVC coated wire as indicated on the plans. Hog ring shall be used to secure the fabric to the tension wires.

Method of Measurement: This work shall be measured for payment by the number of linear feet of completed and accepted protective fence measured from outside to outside of terminal (end) posts.

Basis of Payment: This work will be paid for at the contract unit price per linear foot for “Protective Fence - Chain Link (Bridge)” complete in place, which price shall include all materials, equipment, tools and labor incidental thereto, including installing the posts in the top of the wingwall.

Pay Item

Protective Fence - Chain Link (Bridge)

Pay Unit

L.F.

ITEM #0921001A – CONCRETE SIDEWALK
ITEM #0921002A – CONCRETE SIDEWALK – 8” THICK
ITEM #0921005A – CONCRETE SIDEWALK RAMP

Article 09.21.02 – Materials:

Add the following:

Reinforcement: Shall meet the requirements of Article M.06.01.

Article 09.21.04 – Methods of Measurement:

Add the following:

7. Reinforcement: This material will not be measured for payment, but the cost shall be included in the Contract price for Concrete Sidewalk and Concrete Sidewalk Ramp.

Article 09.21.05 – Basis of Payment:

In the first paragraph, add the following after “gravel or reclaimed miscellaneous aggregate” and before “equipment”:

Reinforcement,

ITEM #0945005A - WILDFLOWER ESTABLISHMENT

Description: The work included in this item shall consist of providing an accepted uniform stand of established wildflowers by furnishing and placing seed and mulch on all areas to be treated as shown on the plans, permits or as directed by the Engineer.

The work will also include the installation of bio-degradable erosion control matting, as shown on plans, permits or as directed by the Engineer, consisting of mulch and netting woven together as a unit.

Materials: All wildflower seed mixture sources shall be locally obtained within the Northeast USA including New England, New York, Pennsylvania, New Jersey, Delaware, or Maryland in order to preserve and enhance the diversity of native wildflower species.

Mulch shall meet the requirements of Article M.13.05.

Bio-degradable erosion control matting, if required, shall be from the Department's Qualified Products List and shall meet the requirements of Article M.13.09.

All seed mixture sources, mulch and erosion control matting shall be approved by Engineer prior to application.

Three approved seed mixtures are detailed below.

1. **New England Wildflower Seed Mix: (NEWP) New England WetMix**, New England Wetland Plants, Inc. 800 Main Street Amherst, MA 01002, or equal. Rate shall be 1 pound PLS per 1900 sq.ft.
2. **XERCES Northeastern Pollinator Mix:** Ernst Conservation Seeds Inc. 8884 Mercer Pike, Meadville, PA, 16335, or equal. Rate shall be 8 pound PLS per 1 acre.
3. **Wildflower & Grass Mix**, Vermont Wetland Plant Supply, LLC, P.O. Box 153, Orwell, VT, 05760, or equal. Rate shall be 1 pound PLS per 1600 sq.ft.

All seed mixtures must be approved by the Engineer in advance of purchase. The materials certification for any proposed mixture shall be submitted a minimum of thirty (30) days prior to delivery on site by the Contractor. All seed material certifications must have seed mixtures that shall not include any invasive species pursuant to Connecticut General Statute Sec. 22a-381d or any State Threatened or State Endangered species known pursuant to Connecticut General Statute Sec. 26-303 which would be a violation of the Connecticut Endangered Species Act. The seed tags from the bags are to be removed by the Engineer upon delivery and attached to the Material Certification. A copy of the seed tag is to be provided to the Environmental Scientist. No seeding shall occur if the requirements are not met.

All approved seed mixtures shall be obtained in sufficient quantities to meet the pure live seed (PLS) application rates as determined by the seed analysis of the mixture.

Construction Methods: Construction methods shall be those established as agronomically acceptable and feasible and approved by the Engineer.

Preparation of Seedbed Areas:

- a. Level areas, median areas, interchanges and lawns: These areas shall be made friable and receptive for seeding by discing or by other approved methods to the satisfaction of the Engineer. The final prepared surface which has been seeded shall meet the lines and grades for such surface areas as shown on the plans, or as directed by the Engineer.
- b. Slope and embankment areas: These areas shall be made friable and receptive to seeding by approved methods which will not disrupt the line and grade of the slope surface. In no event, will seeding be permitted on hard or crusted soil surface.

All areas to be seeded shall be reasonably free from weeds taller than 3 inches. Removal of weed growth for the slope areas shall be those methods which do not rut or scar the slope surface or cause excessive disruption of the slope line or grade as approved by the Engineer. Seeding on level areas shall not be permitted until substantial weed growth is removed and approved by the Engineer.

Seeding Season: The calendar dates for seeding shall be:

Spring – March 1 to June 15

Fall – September 15 to November 15

Seeding Methods: The wildflower seed mixture shall be applied by an agronomically acceptable procedure approved by Environmental Scientist. The rate of application shall be as shown on the plans or directed by the Engineer.

$(\text{Germination Percentage} \times \text{Purity Percentage}) / 100 = \text{Percentage PLS}$

The Engineer shall verify that the seed is applied at a rate which will allow for 100 percent PLS.

Method of Measurement: The work will be measured for payment by the number of pounds of each size and kind of wildflower seed counted, planted and accepted.

Basis of Payment: This work will be paid at the contract unit price per pound for “Wildflower Establishment,” which price shall include all materials, maintenance, equipment tools, labor, transportation, operations, and all work incidental thereto. Partial payment of up to 50% may be

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made for work completed, but not accepted. Full payment shall not be made until the area has been accepted by the Engineer.

Pay Item

Wildflower Establishment

Pay Unit

lb.

ITEM #0950019A – TURF ESTABLISHMENT - LAWN

Description: The work included in this item shall consist of providing an accepted stand of grass by furnishing and placing seed as shown on the plans or as directed by the Engineer. This item shall include all coordination, labor, equipment and materials as specified below, or as otherwise directed by the Engineer.

Materials: The materials for this work shall conform to the requirements of Section 9.50 of Standard Specification Form 818, and as amended as follows:

The following mix shall be used for this item:

Turf Seed Mix:

In order to preserve and enhance the diversity, the source for seed mixtures shall be locally obtained within the Northeast USA including New England, New York, Pennsylvania, New Jersey, Delaware, or Maryland. One approved seed mixture is detailed below. Other proposed mixtures must be approved by the CTDOT Landscape Design office.

<u>Proportion (Percent)</u>	<u>Species Common name</u>	<u>Scientific name</u>
20	Kentucky Bluegrass Improved varieties	Poa pratensis
45	Red Fescue Improved varieties	Festuca rubra
35	Perennial Ryegrass Improved varieties	Lolium perenne

Construction Methods: Construction Methods shall conform to the requirements of Section 9.50 of Standard Specification Form 818, and as amended as follows:

Construction methods shall be those established as agronomically acceptable and feasible and that are approved by the Engineer. Rate of application shall be field determined in Pure Live Seed (PLS) based on the minimum purity and minimum germination of the seed obtained. Calculate the PLS for each seed species in the mix. Adjust the seeding rate for the above composite mix, based on 250 lbs. per acre. The seed shall be mulched in accordance with Article 9.50.03.

Maintenance: The contractor shall mow to a height of 6” every 4 weeks during the warranty period, during the growing season: April through October. The Contractor shall monitor the site for broadleaf weeds, and spot spray herbicide as required. Bare spots larger than 4 square feet shall be re-seeded.

Method of Measurement: This work will be measured for payment by the number of square yards of surface area of accepted established grasses as specified or by the number of square yards of surface area of seeding actually covered and as specified.

Basis of Payment: This work will be paid for at the contract unit price per square yard for “Turf Establishment - Lawn” which price shall include all materials maintenance, equipment, tools, labor, and work incidental thereto. Partial payment of up to 60% may be made for work completed, but not accepted. Accepted work shall be construed as fully established turf in accordance with this specification.

Pay Item	Pay Unit
Turf Establishment - Lawn	s.y.

ITEM #0950040A - CONSERVATION SEEDING FOR SLOPES

Description: The work included in this item shall consist of providing an accepted stand of established conservation grasses by furnishing and placing seed as shown on the plans, permits, or as directed by the Engineer within the wetland mitigation Sites(s) or other areas when required.

Materials: All conservation grass mixture sources shall be locally obtained within the Northeast USA (New England, New York, Pennsylvania, New Jersey, Delaware, or Maryland) in order to preserve and enhance the diversity of native conservation grass species.

Three qualified conservation seed mixtures are detailed below:

1. **New England Conservation/Wildlife Mix**, New England Wetland Plants, Inc. 820 West Street Amherst, MA 01002, or equal. Rate shall be 1 pound PLS per 1,750 sq. ft.
2. **Mesic to Dry Native Pollinator Mix**, Ernst Conservation Seeds, Inc. 8884 Mercer Pike, Meadville, PA 16335, or equal. Rate shall be 1 pound PLS per 2,178 sq. ft.
3. **Vermont Conservation and Wildlife**, Vermont Wetland Plant Supply, LLC, P.O. Box 153, Orwell, VT 05760, or equal. Rate shall be 1 pound PLS per 2,180 sq. ft.

Fertilizer, if required, shall meet the requirements of Article M.13.03.

Mulch shall meet the requirements of Article M.13.05.

Erosion control matting shall be bio-degradable and meet the requirements of Article M.13.09.

All conservation seed mixture sources shall be reviewed and approved by the Engineer in advance of purchase and prior to application.

The Materials Certificate for all seed mixtures shall have a statement that certifies that the seed mixture does not include any invasive species pursuant to Connecticut General Statutes Sec. 22a-381d or any State Threatened or State Endangered species pursuant to Connecticut General Statutes Sec. 26-303. The seed tags from the bags are to be removed by the Engineer upon delivery and attached to the Materials Certificate. Seeding shall not occur if these requirements are not met.

All approved seed mixtures shall be obtained in sufficient quantities to meet the pure live seed (PLS) application rates as determined by the seed analysis of the mixture.

Construction Methods: Construction methods shall be those established as agronomically acceptable and feasible and shall be approved by the Engineer. The methods described in Article 9.50.03 shall be amended as follows:

Conservation seeding for slopes for wetland mitigation Site(s): Seeding shall occur during the fall season immediately following construction of the wetland mitigation Site(s). Seeding for wetland mitigation Site(s) must occur from August 15th to October 31st.

For non-wetland mitigation Site(s), seeding shall occur during the dates specified in Article 9.50.03-2.

If seed is purchased in bulk rather than by PLS, the rate of application must be adjusted to meet the required PLS seeding rate. This seeding rate shall be increased by the appropriate percentage as determined by the following formula based off of the information provided on the seed tags at delivery.

$(\text{Germination Percentage} \times \text{Purity Percentage}) / 100 = \text{Percentage PLS}$

The Engineer will verify that the seed is applied at a rate that will allow for 100 percent PLS. Mowing will not be allowed within areas that are seeded with conservation seed mix, unless authorized by the Engineer.

Method of Measurement: This work will be measured for payment by the number of square yards of surface area of accepted established conservation grasses as specified.

Basis of Payment: This work will be paid for at the Contract unit price per square yard for “Conservation Seeding for Slopes,” which price shall include all materials, maintenance, equipment, tools, labor, and work incidental thereto. Partial payment of up to 50% may be made for work completed, but not accepted. Full payment shall not be made until the area has been accepted by the Engineer.

Pay Item	Pay Unit
Conservation Seeding for Slopes	s.y.

ITEM #0952001A – SELECTIVE CLEARING AND THINNING

Article 9.52.03 – Construction Methods is supplemented as follows:

Where directed by the Engineer, tree branches to be cut, trimmed or removed shall be those that restrict visibility to the U.S. Route 7 northbound approach vehicle detection zone located as shown on the traffic signal plan. This work shall also include tree branches to be cut, trimmed or removed that restrict bicycle and pedestrian mobility and visibility of signage along the roadway and sidewalk.

This work shall be completed prior to installing the video detection camera.

All trees scheduled to be removed shall be visibly marked or flagged by the Contractor at least seven days prior to the cutting of such trees.

The Engineer will inspect the identified trees and verify the limits of clearing and thinning prior to the Contractor proceeding with his cutting operation.

ITEM #0969060A - CONSTRUCTION FIELD OFFICE, SMALL

Description: Under the item included in the bid document, adequate weatherproof office quarters with related furnishings, materials, equipment and other services, shall be provided by the Contractor for the duration of the work, and if necessary, for a close-out period determined by the Engineer. The office, furnishings, materials, equipment, and services are for the exclusive use of municipal forces and others who may be engaged to augment municipal forces with relation to the Contract. The office quarters shall be located convenient to the work site and installed in accordance with Article 1.08.02. This office shall be separated from any office occupied by the Contractor. Ownership and liability of the office quarters shall remain with the Contractor.

Furnishings/Materials/Supplies/Equipment: All furnishings, materials, equipment and supplies shall be in like new condition for the purpose intended and require approval of the Engineer.

Office Requirements: The Contractor shall furnish the office quarters and equipment as described below:

Description \ Office Size	Small	Med.	Large	Extra Large
Minimum Sq. Ft. of floor space with a minimum ceiling height of 7 ft.	400	720	1400	2800
Minimum number of exterior entrances.	2	2	2	2
Minimum number of parking spaces.	7	7	10	15

Office Layout: The office shall have a minimum square footage as indicated in the table above and shall be partitioned as shown on the building floor plan as provided by the Engineer.

Unless otherwise approved by the Engineer, office space shall be partitioned into segregated work areas for each user as follows:

- Each work area (or cubicle) shall be a minimum of 8 feet × 8 feet, with full height walls or tall cubicle partitions (minimum 6 feet high), placed to provide a minimum of 6 feet walking space around and between each user work area (for social distancing).
- Only one user (workstation/desk) per work area.
- Desks, tables and other work surfaces shall be arranged so that adjacent users do not face each other.

Tie-downs and Skirting: Modular offices shall be tied-down and fully skirted to ground level.

Lavatory Facilities: For field offices sizes Small and Medium the Contractor shall furnish a toilet facility at a location convenient to the field office for use by municipal personnel and such assistants as they may engage; and for field offices sizes Large and Extra Large the Contractor shall furnish two (2) separate lavatories with toilet (men and women), in separately enclosed rooms that are properly ventilated and comply with applicable sanitary codes. Each lavatory shall have hot and cold running water and flush-type toilets. For all facilities the Contractor shall supply lavatory and sanitary supplies as required.

Windows and Entrances: The windows shall be of a type that will open and close conveniently, shall be sufficient in number and size to provide adequate light and ventilation, and shall be fitted with locking devices, blinds and screens. The entrances shall be secure, screened, and fitted with a lock for which four keys shall be furnished. All keys to the construction field office shall be furnished to the municipality and will be kept in their possession while State personnel are using the office. Any access to the entrance ways shall meet applicable building codes, with appropriate handrails. Stairways shall be ADA/ABA compliant and have non-skid tread surfaces. An ADA/ABA compliant ramp with non-skid surface shall be provided with the Extra-Large field office.

Lighting: The Contractor shall equip the office interior with electric lighting that provides a minimum illumination level of 100 foot-candles at desk level height, and electric outlets for each desk and drafting table. The Contractor shall also provide exterior lighting that provides a minimum illumination level of 2 foot-candles throughout the parking area and for a minimum distance of 10 ft. on each side of the field office.

Parking Facility: The Contractor shall provide a parking area, adjacent to the field office, of sufficient size to accommodate the number of vehicles indicated in the table above. If a paved parking area is not readily available, the Contractor shall construct a parking area and driveway consisting of a minimum of 6 inches of processed aggregate base graded to drain. The base material will be extended to the office entrance.

Field Office Security: Physical Barrier Devices - This shall consist of physical means to prevent entry, such as: 1) All windows shall be barred or security screens installed; 2) All field office doors shall be equipped with dead bolt locks and regular day operated door locks; and 3) Other devices as directed by the Engineer to suit existing conditions.

Electric Service: The field office shall be equipped with an electric service panel, wiring, outlets, etc., to serve the electrical requirements of the field office, including: lighting, general outlets, computer outlets, electronics, etc., and meet the following minimum specifications:

- A. 120/240 volt, 1 phase, 3 wire
- B. Ampacity necessary to serve all equipment. Service shall be a minimum 100 amp dedicated to the construction field office.
- C. The electrical panel shall include a main circuit breaker and branch circuit breakers of the size and quantity required.
- D. Additional 120 volt, single phase, 20 amp, isolated ground dedicated power circuit with dual NEMA 5-20 receptacles will be installed at each desk and personal computer table (workstation) location.
- E. Additional 120 volt, single phase, 20 amp, isolated ground dedicated power circuit with dual NEMA 5-20 receptacles will be installed, for use by the Telephone Company.
- F. Additional 120-volt circuits and duplex outlets as required meeting National Electric Code requirements.
- G. One exterior (outside) wall mounted GFI receptacle, duplex, isolated ground, 120 volt, straight blade.
- H. After work is complete and prior to energizing, the Town's electrical inspector, must be contacted.

- I. Prior to field office removal, the Town must be notified to deactivate the communications equipment.

Heating, Ventilation and Air Conditioning (HVAC): The field office shall be equipped with sufficient and properly operating, heating, air conditioning, and ventilation equipment to maintain a temperature range of 68°-80° Fahrenheit within the field office. The Contractor shall increase ventilation rates and increase the percentage of outdoor air that circulates into the system where possible.

Telephone Service: The Contractor shall provide telephone service with unlimited nation-wide calling plan. For a Small, Medium and Large field office this shall consist of the installation of two (2) telephone lines: one (1) line for phone/voice service and one (1) line dedicated for the facsimile machine. For an Extra-Large field office this shall consist of four (4) telephone lines: three (3) lines for phone/voice service and one (1) line dedicated for facsimile machine. The Contractor shall pay all charges.

Additional Equipment, Facilities and Services: The Contractor shall provide at the field Office at least the following to the satisfaction of the Engineer:

Furnishing Description	Office Size			
	Small	Med.	Large	Extra Large
	Quantity			
Office desk (2.5 ft. x 5 ft.) with drawers, locks, and matching desk chair that have pneumatic seat height adjustment and dual wheel casters on the base.	1	3	5	8
Standard secretarial type desk and matching desk chair that has pneumatic seat height adjustment and dual wheel casters on the base.	-	-	-	1
Personal computer tables (4 ft. x 2.5 ft.).	2	3	5	8
Drafting type tables (3 ft. x 6 ft.) and supported by wall brackets and legs; and matching drafter’s stool that have pneumatic seat height adjustment, seat back and dual wheel casters on the base.	1	1	1	2
Conference table, 3 ft. x 12 ft.	-	-	-	1
Table – 3 ft. x 6 ft.	-	-	-	1
Office Chairs.	2	4	8	20
Mail slot bin – legal size.	-	-	1	1
Non-fire-resistant cabinet.	-	-	2	4
Fire resistant cabinet (legal size/4 drawer), locking.	1	1	2	3
Storage racks to hold 3 ft. x 5 ft. display charts.	-	-	1	2
Vertical plan racks for 2 sets of 2 ft. x 3 ft. plans for each rack.	1	1	2	2
Double door supply cabinet with 4 shelves and a lock – 6 ft. x 4 ft.	-	-	1	2
Case of cardboard banker boxes (Min 10 boxes/case)	1	1	2	3

Open bookcase – 3 shelves – 3 ft. long.	-	-	2	2
White Dry-Erase Board, 36” x 48”min. with markers and eraser.	1	1	1	1
Interior partitions – 6 ft. x 6 ft., soundproof type, portable and freestanding.	-	-	6	6
Coat rack with 20 coat capacity.	-	-	-	1
Wastebaskets - 30 gal., including plastic waste bags.	1	1	1	2
Wastebaskets - 5 gal., including plastic waste bags.	1	3	6	10
Electric wall clock.	-	-	-	2
Electronic Level	1	1	1	2
Furnishing Description	Office Size			
	Small	Med.	Large	Extra Large
	Quantity			
Telephone.	1	2	3	-
Full size stapler 20 (sheet capacity, with staples)	1	2	5	8
Desktop tape dispensers (with Tape)	1	2	5	8
8 Outlet Power Strip with Surge Protection	3	4	6	9
Rain Gauge	1	1	1	1
Business telephone system for three lines with ten handsets, intercom capability, and one speaker phone for conference table.	-	-	-	1
Mini refrigerator - 3.2 c.f. min.	1	1	1	1
Hot and cold-water dispensing unit. Disposable cups and bottled water shall be supplied by the Contractor for the duration of the project.	1	1	1	1
Microwave, 1.2 c.f. , 1000W min.	1	1	1	1
Fire extinguishers - provide and install type and *number to meet applicable State and local codes for size of office indicated, including a fire extinguisher suitable for use on a computer terminal fire.	*	*	*	*
Electric pencil sharpeners.	1	2	2	2
Electronic office type printing calculators capable of addition, subtraction, multiplication and division with memory and a supply of printing paper.	1	1	2	4
Small Multi-Function Laser Printer/Copier/Scanner/Fax combination unit, network capable, as specified below under <u>Computer Related Hardware and Software</u> .	1	1		
Large Multi-Function Laser Printer/Copier/Scanner/Fax combination unit, network capable, as specified below under <u>Computer Related Hardware and Software</u> .			1	1
Field Office Wi-Fi Connection as specified below under <u>Computer Related Hardware and Software</u>	1	1	1	1

Wi-Fi Printer as specified below under Computer Related Hardware and Software.	1	1	1	1
Digital Camera as specified below under Computer Related Hardware and Software.	1	1	3	3
Video Projector as specified below under Computer Related Hardware and Software.	-	-	-	1
Smart Board as specified below under Computer Related Hardware and Software.	-	-	-	1
Conference Room Presentation Television as specified below under Computer Related Hardware and Software.	-	-	-	-
Infrared Thermometer, including annual third-party certified calibration, case, and cleaning wipes.	1	1	1	2
Concrete Curing Box as specified below under Concrete Testing Equipment.	1	1	1	1
Concrete Air Meter and accessories as specified below under Concrete Testing Equipment as specified below. Contractor shall provide third party calibration on a quarterly basis.	1	1	1	1
Concrete Slump Cone and accessories as specified below under Concrete Testing Equipment.	1	1	1	1
First Aid Kit	1	1	1	1
Disinfecting wipes, sprays, and other supplies (** as specified below under Maintenance).	**	**	**	**
Hand sanitizer stations (***) maintain one full station at each entrance, restroom, and conference area).	***	***	***	***
Flip Phones as specified under <u>Computer Related Hardware and Software</u> .	-	-	-	-
Smart Phones as specified under <u>Computer Related Hardware and Software</u> .	-	-	-	-

The furnishings and equipment required herein shall remain the property of the Contractor. Any supplies required to maintain or operate the above listed equipment or furnishings shall be provided by the Contractor for the duration of the project.

Computer Related Hardware and Software: The municipality will supply by its own means the actual Personal Computers for the municipal representatives. The Contractor shall supply the Field Office Wi-Fi Connection, Wi-Fi Printer, Digital Camera(s), Flip Phones, Smart Phones, Multifunction Laser Printer/Copier/Scanner/Fax, Video Projectors, and Smart Board(s), Conference Room Presentation Television, as well as associated hardware and software, meeting the requirements of this specification as well as the latest minimum specifications posted, as of the project advertising date, at CTDOTs web site <http://www.ct.gov/dot/cwp/view.asp?a=1410&q=563904>

Within 10 calendar days after the signing of the Contract but before ordering/purchasing the Wi-Fi Printer (separate from the Multifunction Laser Printer/Copier/Scanner/Fax), Field Office Wi-Fi, Digital Camera(s), Flip Phones, Smart Phones, Multifunction Laser Printer/Copier/Scanner/Fax,

Video Projector(s) and Smart Board(s) as well as associated hardware, the Contractor must submit a copy of their proposed order(s) with catalog cuts and specifications to the municipality for review and approval. The Wi-Fi Printer, Wi-Fi Router, Flip Phones, Smart Phones, digital cameras, Projector(s) and Smart Board(s) will be reviewed by municipal personnel. The Multifunction Laser Printer/Copier/Scanner/Fax will be reviewed by the municipality. The Contractor shall not purchase the hardware, software, or services until the municipality informs them that the proposed equipment, software, and services are approved. The Contractor will be solely responsible for the costs of any hardware, software, or services purchased without approval.

The Contractor and/or their internet service provider shall be responsible for the installation and setup of the field office Wi-Fi, Wi-Fi printer, and the configuration of the wireless router as directed by the municipality. Installation will be coordinated with the municipality and Project personnel.

After the approval of the hardware and software, the Contractor shall contact the designated representatives of the municipality, a minimum of 2 working days in advance of the proposed delivery or installation of the Field Office Wi-Fi Connection, Wi-Fi Printer, Digital Camera(s), Flip Phones, Smart Phones, Multifunction Laser Printer/Copier/Scanner/Fax, Video Projectors and Smart Board(s), as well as associated hardware, software, supplies, and support documentation.

The Contractor shall provide all supplies, paper, maintenance, service and repairs (including labor and parts) for the Wi-Fi printers, copiers, field office Wi-Fi, fax machines and other equipment and facilities required by this specification for the duration of the Contract. All repairs must be performed with-in 48 hours. If the repairs require more than 48 hours, then an equal or better replacement must be provided.

Once the Contract has been completed, the hardware and software will remain the property of the Contractor.

First Aid Kit: The Contractor shall supply a first aid kit adequate for the number of personnel expected based on the size of the field office specified and shall keep the first aid kit stocked for the duration that the field office is in service.

Rain Gauge: The Contractor shall supply install and maintain a rain gauge for the duration of the project, meeting these minimum requirements. The rain gauge shall be installed on the top of a post such that the opening of the rain gauge is above the top of the post an adequate distance to avoid splashing of rainwater from the top of the post into the rain gauge. The location of the rain gauge and post shall be approved by the Engineer. The rain gauge shall be made of a durable material and have graduations of 0.1 inches or less with a minimum total column height of 5 inches. If the rain gauge is damaged the Contractor shall replace it prior to the next forecasted storm event at no additional cost.

Electronic Level: The Contractor shall supply and maintain in working order, for the duration of the Contract, the number of electronic levels, identified in the Additional Equipment, Facilities and Services table of this specification. The electronic levels shall meet the following requirements:

- A. 48-inch length, box beam type
- B. IP65 water and dust proof
- C. 0.1-degree accuracy
- D. Backlit display
- E. Carrying case included
- F. New or like new condition

Concrete Testing Equipment: If the Contract includes items that require compressive strength cylinders for concrete, in accordance with the Schedule of Minimum Testing Requirements for Sampling Materials for Test, the Contractor shall provide the following equipment.

- A. Concrete Cylinder Curing Box – meeting the requirements of Section 6.12 of the Standard Specifications.
- B. Air Meter – The air meter provided shall be in good working order and meet the requirements of AASHTO T 152.
- C. Slump Cone Mold – Slump cone, base plate, and tamping rod shall be provided in like-new condition and meet the requirements of AASHTO T119, Standard Test Method for Slump of Hydraulic-Cement Concrete.

All testing equipment will remain the property of the Contractor at the completion of the project.

Insurance Policy: The Contractor shall provide a separate insurance policy, with no deductible, in the minimum amount of five thousand dollars (\$5,000) in order to insure all municipal-owned data equipment and supplies used in the office against all losses. The Contractor shall be named insured on that policy, and the municipality shall be an additional named insured on the policy. These losses shall include, but not be limited to theft, fire, and physical damage. The municipality will be responsible for all maintenance costs of municipality owned computer hardware. In the event of loss, the Contractor shall provide replacement equipment in accordance with current municipal equipment specifications, within seven days of notice of the loss. If the Contractor is unable to provide the required replacement equipment within seven days, the municipality may provide replacement equipment and deduct the cost of the equipment from monies due or which may become due the Contractor under the Contract or under any other contract. The Contractor's financial liability under this paragraph shall be limited to the amount of the insurance coverage required by this paragraph. If the cost of equipment replacement required by this paragraph should exceed the required amount of the insurance coverage, the municipality will reimburse the Contractor for replacement costs exceeding the amount of the required coverage.

Maintenance: During the occupancy by the municipality, the Contractor shall maintain all facilities and furnishings provided under the above requirements, and shall maintain and keep the office quarters clean through the use of professional cleaning including, but not limited to, vacuuming carpet, washing & waxing floors, cleaning restrooms, removal of trash, general cleaning, etc. The general cleaning of the office shall be at least twice weekly. Restrooms, portable toilets and all other high touch areas shall be cleaned and disinfected at least every two days using CDC and Department of Health recommended and non-hazardous techniques. High touch areas to be cleaned include but are not be limited to (depending on the facilities supplied):

- A. Arms on chairs
- B. Table/Desktops
- C. Handrails
- D. Doorknobs and handles
- E. Countertops
- F. Elevator buttons
- G. Coffee pots
- H. Refrigerator / microwave / dishwasher / toaster handles
- I. Water dispensers
- J. Cabinet and file drawer knobs / handles
- K. Phones and keypads
- L. Copier / printer / fax control buttons
- M. Sinks and faucets
- N. Light switches

In addition, the Contractor shall supply appropriate (CDC and Department of Health recommended and non-hazardous), cleaning and disinfection supplies (wipes and sprays), and single use gloves for the use of the municipal representatives, for disinfection of surfaces and equipment in between the 2 day interval noted above. The Contractor shall always maintain a minimum of 500 wipes and 100 pairs of disposable gloves in the field office.

Exterior areas shall be mowed and clean of debris. A trash receptacle (dumpster) with weekly pickup (trash removal) shall be provided. Snow removal, sanding and salting of all parking, walkway, and entrance ways areas shall be accomplished during a storm if on a workday during work hours, immediately after a storm and prior to the start of a workday. If snow removal, salting and sanding are not completed by the specified time, the State will provide the service and all costs incurred will be deducted from the next payment estimate.

Method of Measurement: The furnishing and maintenance of the construction field office will be measured for payment by the number of calendar months that the office is in place and in operation, rounded up to the nearest month.

There will not be any price adjustment due to any change in the minimum computer related hardware and software requirements.

Basis of Payment: The furnishing and maintenance of the Construction Field Office will be paid for at the Contract unit price per month for “Construction Field Office, (Type),” which price shall include all material, equipment, labor, service contracts, licenses, software, repair or replacement of hardware and software, related supplies, utility services, parking area, external illumination, trash removal, snow and ice removal, and work incidental thereto, as well as any other costs to provide requirements of this specified this specification.

<u>Pay Item</u>	<u>Pay Unit</u>
Construction Field Office, (Type)	Month

ITEM NO. 0971001A – MAINTENANCE AND PROTECTION OF TRAFFIC

Article 9.71.01 – Description *is supplemented by the following:*

The Contractor shall maintain and protect traffic as described by the following and as limited in the special provision for Section 1.08 - Prosecution and Progress:

Town of Ridgefield – U.S. Route 7 at Depot Road and Route 102 (Intersection #117-202)

The Contractor shall maintain and protect a minimum of 1 lane of traffic in each direction with each lane on a paved travel path not less than 11 feet in width, with the following exceptions:

1. During the allowable periods and when the Contractor is actively working, the Contractor will be permitted to maintain and protect at least an alternating one-way traffic operation on a paved travel path not less than 11 feet in width and no more than 300 feet in length, unless specified elsewhere in the Contract. There shall be no more than one alternating one-way traffic operation within the Project limits without prior approval of the Engineer.

Commercial and Residential Driveways

The Contractor shall maintain access to and egress from all commercial and residential driveways throughout the Project limits. The Contractor will be permitted to temporarily close affected driveways while actively working with coordination and permission from the owner or proprietor.

Intermediate Term Sidewalk Closures

The Contractor shall maintain and protect existing pedestrian accommodations, or a minimum of 4 feet in width, on all existing sidewalks, sidewalk ramps, and access to pedestrian pushbuttons, with the following exception:

- During the allowable periods and when the Contractor is actively constructing pedestrian amenities or installing signal equipment, the Contractor will be allowed to close pedestrian sidewalks and sidewalk ramps and restrict access to pedestrian pushbuttons for no more than a continuous 48 hour period of time.

No more than two corners of an intersection may be closed for an intermediate term sidewalk closure at any time. Where all four corners of an intersection have sidewalks and sidewalk ramps, diagonal corners shall not be closed at the same time.

During the intermediate term sidewalk closure, all approaches to the sidewalk shall be blocked by Construction Barricade Detectable with Sidewalk Closed signs.

The Contractor shall ensure that traffic control signals with pedestrian phases where access to the pushbuttons cannot be provided are revised at the start of the closure to automatically activate the pedestrian phase every signal cycle.

Intermediate term sidewalk closures may be extended to 72 hours with prior approval of the Engineer.

Article 9.71.03 - Construction Methods *is supplemented as follows:*

General

When the Contractor is excavating adjacent to the roadway, the Contractor shall provide a 3 foot shoulder between the work area and travel lanes, with traffic drums spaced every 50 feet. At the end of the work shift if the vertical drop-off exceeds 3 inches, the Contractor shall provide a temporary bituminous concrete traversable slope of 4:1 or flatter that is acceptable to the Engineer.

The Contractor, during the course of any active overhead construction work, shall close the lanes directly below the work area for the entire length of time overhead work is being undertaken.

At no time shall an overhead sign be left partially removed or installed.

When an existing sign is to be relocated or replaced, the work shall be completed during the same work shift.

The field installation of a signing pattern shall constitute interference with existing traffic operations and shall not be allowed, except during the allowable periods.

Existing Signing

The Contractor shall maintain all existing overhead and side-mounted signs within the Project limits throughout the duration of the Project. The Contractor shall temporarily relocate signs and sign supports as many times as deemed necessary, and shall install temporary sign supports if necessary and as directed by the Engineer.

Requirements for Winter

The Contractor shall schedule a meeting with representatives of the Department, including the offices of Maintenance and Traffic, and the Town/City to determine any interim traffic control measures the Contractor shall accomplish prior to winter to provide safety to motorists and permit adequate snow removal procedures. This meeting shall be held prior to October 31 of each year and will include, but not be limited to, discussion of the status and schedule of the following items: lane and shoulder widths, pavement restoration, traffic signal work, pavement markings, and signing.

Signing Patterns

The Contractor shall erect and maintain all signing patterns in accordance with the traffic control plans contained herein. Proper distances between advance warning signs and proper taper lengths are mandatory.

Pavement Markings -Non-Limited Access Roadways

During construction, the Contractor shall maintain all pavement markings on paved surfaces on all roadways throughout the limits of the project.

Temporary pavement markings shall be installed on each intermediate course of bituminous concrete pavement and on any milled surface by the end of the work shift.

Permanent Epoxy Resin Pavement Markings shall be installed on the final course of bituminous concrete pavement within 10 calendar days of the final pavement installation if no Pavement Marking Grooves are proposed.

Temporary Pavement Markings

Temporary pavement markings that will be in place for less than 72 continuous hours may consist of temporary plastic pavement marking tape at the Contractor's expense. Additionally;

1. These temporary pavement markings shall include centerlines, lane lines (solid and broken), and stop bars.
2. Centerlines shall consist of two 4 inch wide yellow markings, 2 feet in length, side by side, 4 inches apart, at 40 foot intervals.
3. Lane lines shall consist of 4 inch wide white markings, 2 feet in length, at 40 foot intervals.
4. No passing zones shall be posted with signs in those areas where the final centerlines have not been established on two-way roadways.
5. Stop bars may consist of two 6 inch wide white markings or three 4 inch wide white markings placed side by side.
6. The temporary plastic pavement marking tape shall be installed in accordance with Section 12.12.
7. The Contractor shall remove and dispose of the temporary plastic pavement marking tape prior to another course of bituminous concrete pavement being installed.

Temporary pavement markings that will be in place for 72 continuous hours or more should consist of temporary painted pavement markings and shall be installed in accordance with Section 12.09. The markings shall include centerlines, edge lines, lane lines (solid and broken), lane-use arrows, and stop bars on each intermediate course of bituminous concrete pavement and on any milled surface by the end of the work shift. Edge lines and lane-use arrows are not required if the next course of bituminous concrete pavement will be placed within 10 calendar days.

All temporary pavement markings exposed throughout the winter shall be Epoxy Resin Pavement Markings, unless directed otherwise by the Engineer.

Temporary pavement markings, as described above, shall be maintained until the permanent pavement markings are installed.

Final Pavement Markings

Refer to Pavement Marking Groove special provisions for pavement marking requirements. Permanent epoxy resin pavement markings shall be installed in accordance with Section 12.10 and the applicable Traffic Engineering Standard Drawings.

If Temporary Plastic Pavement Marking Tape is installed, then the Contractor shall remove and dispose of these markings during the same work shift that the permanent epoxy resin pavement markings are to be installed. The cost of furnishing, installing and removing the Temporary Plastic Pavement Marking Tape shall be at the Contractor's expense.

Traffic Control During Construction Operations

The following guidelines shall assist field personnel in determining when and what type of traffic control patterns to use for various situations. These guidelines shall provide for a safer and more efficient movement of traffic through work zones and enhance the safety of work forces in the work area.

Traffic Control Patterns

Traffic control patterns shall be used when a work operation requires that all or part of any vehicle or work area protrudes onto any part of a travel lane or shoulder or is within the clear zone. For each situation, the installation of traffic control devices shall be based on the following:

- Speed and volume of traffic.
- Duration of operation.
- Exposure to hazards.

Traffic control patterns shall be uniform, neat, and orderly in order to command respect from the motorist.

Lane reduction tapers should be placed so that the entire length of the taper is installed on a tangent section of roadway and the entire taper area can be seen by the motorist.

All existing conflicting signs shall be removed, covered with an opaque material, or turned so that they are not legible to oncoming traffic prior to implementing a traffic control pattern. The existing signs shall be uncovered or reinstalled once the pattern is removed.

A buffer area should be provided during installation of a traffic control pattern and maintained for the duration of the work. The buffer area shall be free of any equipment, workers, materials, and parked vehicles.

Construction Traffic Control Plans 19 through 25 should be used for moving operations such as line striping, rumble strips, pothole patching, mowing, or sweeping when it is necessary for equipment to occupy a travel lane.

Traffic control patterns are not required for vehicles on an emergency patrol type activity or for a short duration stop of up to one hour, as long as the equipment is contained within the shoulder. Flashing lights, arrow boards, truck-mounted or trailer-mounted impact attenuators, and appropriate Trafficperson(s) shall be used when required.

In a situation not adequately covered by the Construction Traffic Control Plans, the Contractor shall contact the Engineer for assistance prior to setting up a traffic control pattern.

Placement of Signs

Signs shall be placed in a position that allows motorists the opportunity to reduce their speed prior to the work area. Signs shall be installed on the same side of the roadway as the work area. On multi-lane divided highways, advance warning signs shall be installed on both sides of the highway. On directional roadways (on-ramps, off-ramps, one-way roads) where the sight distance to signs is restricted, these signs should be installed on both sides of the roadway.

Allowable Adjustment of Signs and Devices Shown on the Construction Traffic Control Plans

The Construction Traffic Control Plans contained herein show the location and spacing of signs and devices under ideal conditions. Signs and devices should be installed as shown on these plans.

The proper application of the Construction Traffic Control Plans and installation of traffic control devices is dependent upon actual field conditions.

In the case of a horizontal or vertical sight restriction in advance of the work area, the traffic control pattern shall be extended to provide adequate sight distance for approaching traffic.

Adjustments to the Construction Traffic Control Plans shall only be made at the direction of the Engineer.

Table 1 indicates the minimum taper lengths required for a lane closure based on the posted speed limit and lane width of the roadway. These taper lengths shall only be used when the recommended taper lengths shown on the Construction Traffic Control Plans cannot be achieved.

Table 1 – Minimum Taper Length

POSTED SPEED LIMIT (MPH)	MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE (FEET)	
	FREEWAYS	SECONDARY ROADS
30 OR LESS	180	165
35	245	225
40	320	295
45	540	495
50	600	550
55	660	605
65	780	715

1. Work Zone Safety Meetings

- 1.a) Prior to the commencement of work, a Work Zone Safety Meeting shall be conducted with representatives from DOT Construction, Connecticut State Police (Local Barracks), Municipal Police, the Contractor (Project Superintendent) and the Traffic Control Subcontractor (if different than the prime Contractor) to review the traffic operations, lines of responsibility, and operating guidelines which will be used on the Project. DOT Traffic Engineering shall be invited to the Work Zone Safety Meeting. Other Work Zone Safety Meetings during the course of the Project should be scheduled as needed.
- 1.b) A Work Zone Safety Meeting Agenda shall be developed and used at the Meeting to outline the anticipated traffic control issues during the construction of this Project. Any issues that can't be resolved at these Meetings will be brought to the attention of the District Engineer and the Office of Construction. The agenda shall include:
 - i. Review Project scope of work and time;
 - ii. Review Section 1.08, Prosecution and Progress;
 - iii. Review Section 9.70, Trafficpersons;
 - iv. Review Section 9.71, Maintenance and Protection of Traffic;
 - v. Review Contractor's schedule and method of operations;
 - vi. Review special concern areas: ramps, turning roadways, medians, lane drops, etc.;
 - vii. Open discussion of work zone questions and issues;
 - viii. Discussion of review and approval process for changes in Contract requirements as they relate to work zone areas.

2. General

- 2.a) Traffic control patterns shall only be installed if the required minimum number of signs, traffic cones, traffic drums, and other equipment (i.e. one Arrow Board for each lane closed, two Truck-Mounted or Trailer-Mounted Attenuators (TMAs), Changeable Message Sign, etc.) are on Site.
- 2.b) The Contractor shall have spare maintenance and protection of traffic equipment (TMAs, Arrow Board, Changeable Message Sign(s), construction signs, traffic cones, traffic drums, etc.) available at all times in case of mechanical failures, etc. Spare maintenance and protection of traffic equipment installed as a result of a sudden equipment breakdown shall be replaced by the Contractor within 24 hours.
- 2.c) Failure of the Contractor to have the required minimum number of signs, personnel, and equipment, which results in the pattern not being installed, shall not be a reason for a time extension or claim for lost time.
- 2.d) In cases of differences of opinion between the Contractor and the Inspection staff, the Contractor shall follow the directions of the Engineer. The matter shall be brought to the District Office for resolution immediately or, in the case of work after regular business hours, on the next business day.

3. Installing and Removing Traffic Control Patterns

- 3.a) Lane closures shall be installed beginning with the advance warning signs and proceeding forward toward the work area.
- 3.b) Lane closures shall be removed in the reverse order, beginning at the end of the work area, or traffic control pattern, and proceeding back toward the advance warning signs.
- 3.c) Stopping traffic may be allowed within the allowable hours stated in Section 1.08.04:
 - i. For those activities stated within the Contract.
 - ii. During paving, milling operations, or similar activities where, in the middle of the operation, it is necessary to flip the pattern to complete the operation on the other half of the roadway so traffic does not travel across the longitudinal joint or difference in roadway elevation.
 - iii. To move slow moving equipment across live traffic lanes into the work area.
- 3.d) The Contractor shall adhere to using the proper signs, placing the signs correctly, and ensuring the proper spacing of signs.
- 3.e) Additional devices are required on entrance ramps, exit ramps, and intersecting roads to warn and/or move traffic into the proper travel path prior to merging with or exiting from the mainline traffic. This shall be completed before installing the mainline pattern past the ramp or intersecting roadway.
- 3.f) Workers are prohibited from crossing the travel lanes on limited access roadways to install and remove signs or other devices on the opposite side of the roadway. Any signs or devices on the opposite side of the roadway shall be installed and removed separately.

4. Implementation of Rolling Road Block (RRB)

- 4.a) Temporary road closures using a RRB may be allowed on limited access highways for operations associated with the installation and removal of temporary lane closures. RRB may be allowed for the installation and removal of lead signs and lane tapers only and shall meet the following requirements:
 - i. Refer to the Limitation of Operations Chart provided in Section 1.08.04 for the hours allowed for implementing a RRB operation. The Contractor shall only implement a RRB operation within the hours shown in the Chart.
 - ii. In areas with good sight lines and full shoulders, signs on the side of the road opposite the traffic pattern should be installed in a separate operation.
 - iii. TMAs equipped with Arrow Boards shall be used to slow traffic to implement the RRB. State Police Officers in marked vehicles may be used to support the implementation of the RRB. The RRB shall start by having all vehicles, including TMAs and police vehicles, leave the shoulder or on-ramp and accelerate to normal roadway speeds in each lane. The vehicles will then position themselves side by side and decelerate to the RRB speed on the highway.

- iv. A Pre-Warning Vehicle, as specified elsewhere in the Contract, shall be used to advise the motorists that sign pattern installation or removal is underway.
- v. The RRB duration shall not exceed 15 minutes from the start of the traffic block until all lanes are opened as designated in the Limitation of Operations chart. If the RRB duration exceeds 15 minutes on 2 successive shifts, no further RRB will be allowed until the Contractor obtains approval for a revised installation procedure from the District.
- vi. RRB shall not be used to expand a lane closure pattern to an additional lane during the shift. The workers and equipment required to implement the additional lane closure should be staged from within the closed lane. TMAs (and State Police if available) shall be used to protect the workers installing the taper in the additional lane.
- vii. Exceptions to these work procedures may be submitted to the District Office for consideration. A minimum of 2 business days shall be allowed for review and comment by the District.
- viii. The Engineer and the Contractor will review and discuss the RRB procedures (including any revisions) in advance of the work. The implementation of the agreed upon plan will be reviewed with the State Police during the Work Zone Safety Meeting held before each shift involving temporary lane closures. If the State Police determine that alternative procedures should be implemented for traffic control during the work shift, the Department and Contractor will attempt to resolve any discrepancies with the duty sergeant at the Troop. If the discrepancies are unable to be resolved prior to the start of the shift, then the work will proceed as recommended by the Department. Any unresolved issues shall be addressed the following day.

5. Use of Arrow Boards

- 5.a) On limited access roadways, one Arrow Board shall be used for each lane that is closed. The Arrow Board shall be installed concurrently with the installation of the traffic control pattern and its placement shall be as shown on the Construction Traffic Control Plans. Additional Arrow Boards shall be deployed if sight distances are limited.
- 5.b) On non-limited access roadways, the use of an Arrow Board for lane closures is optional. The roadway geometry, sight distance, and traffic volume shall be considered in the decision to use the Arrow Board.
- 5.c) A vehicle displaying an arrow board shall be equipped with high-intensity rotating, flashing, oscillating, or strobe lights.
- 5.d) The flashing arrow mode shall be used for lane closure (merge) tapers.
- 5.e) The flashing arrow mode shall not be used for temporary alternating one-way traffic operations or to laterally shift lanes of traffic.

- 5.f) The flashing double arrow mode shall only be used for closing a center lane on a multilane roadway where adjacent left and right lanes remain open.
- 5.g) For shoulder work or roadside work near the shoulder, the Arrow Board shall be positioned in the shoulder and the flashing alternating diamond mode should be used.
- 5.h) The flashing alternating diamond caution mode should also be used when supplemental Arrow Boards are positioned in an already closed lane.

6. Use of Truck-Mounted or Trailer-Mounted Impact Attenuators (TMAs)

- 6.a) On limited access roadways, lane closures shall use a minimum of two TMAs to install and remove traffic control patterns. If two TMAs are not available, then the pattern shall not be installed.
- 6.b) On non-limited access roadways, the use of TMAs to install and remove patterns closing a lane(s) is optional. The roadway geometry, sight line distance, and traffic volume shall be considered in the decision to utilize the TMAs.
- 6.c) On limited access roadways, one TMA shall be placed on the shoulder and the second TMA shall be approximately 1,000 feet ahead blocking the lane to establish the advance and transition signing. The Arrow Board mounted on the TMA shall be in the arrow mode when taking the lane. The sign truck and workers shall be at sufficient distance ahead of the second TMA. In no case shall the TMA be used as the sign truck or a work truck. Once the transition is in place, the TMAs shall travel in the closed lane until all Portable Changeable Message Signs, signs, Arrow Boards, and cones/drums are installed. The Arrow Board mounted on the TMA should be in the flashing alternating diamond caution mode when traveling in the closed lane.
- 6.d) A TMA shall be placed prior to the first work area in the pattern. If there are multiple work areas within the same pattern, then additional TMAs shall be positioned at each additional work area as needed. The Arrow Board mounted on the TMA should be in the flashing alternating diamond caution mode when in the closed lane.
- 6.e) TMAs shall be positioned a sufficient distance prior to the workers or equipment being protected to allow for appropriate vehicle roll-ahead in the event that the TMA is hit, but not so far that an errant vehicle could travel around the TMA and into the work area. For additional placement and use details, refer to Section 18.06. Some operations, such as paving and concrete repairs, do not allow for placement of the TMA(s) within the specified distances. In these situations, the TMA(s) shall be placed at the beginning of the work area and shall be advanced as the paving or concrete operations proceed.
- 6.f) TMAs will be paid for in accordance with how the unit is used. If it is used as a TMA and is in the proper location as specified, then it will be paid for at the specified hourly rate for Truck-Mounted or Trailer-Mounted Impact Attenuator. When the TMA is used

as an Arrow Board, it will be paid for at the daily rate for Arrow Board. If a TMA is used to install and remove a pattern and is also used as an Arrow Board in the same day, then the unit will be paid for as a Truck-Mounted or Trailer-Mounted Impact Attenuator for the hours used to install and remove the pattern, typically 2 hours (1 hour to install and 1 hour to remove). If the TMA is also used as an Arrow Board during the same day, then the unit will only be paid for at the daily rate as an Arrow Board.

7. Use of Traffic Drums and Traffic Cones

- 7.a) On limited-access highways, ramps, and turning roadways:
 - i. Traffic drums shall be used for taper channelization.
 - ii. Traffic drums shall be used to delineate raised catch basins and other hazards.
 - iii. Traffic cones with a minimum height of 42 inches may be used in place of drums in the tangent section of a closed lane or shoulder.
 - iv. Traffic cones less than 42 inches in height shall not be used.
- 7.b) On all roadways:
 - i. Traffic drums shall be used in place of traffic cones in traffic control patterns that are in effect for more than a 36-hour duration.
 - ii. Traffic cones shall not be left unattended.
 - iii. Traffic cones with a minimum height of 42 inches shall be used when the posted speed limit is 45 MPH or above.
- 7.c) Typical spacing of traffic drums and/or cones shown on the Construction Traffic Control Plans in the Contract are maximum spacings and may be reduced to meet actual field conditions as required.

8. Use of Barricade Warning Lights

- 8.a) Barricade Warning Lights may be installed on channelizing devices when used in a merge taper. The Barricade Warning Lights shall flash in a sequential pattern when used in a merge taper. The successive flashing shall occur from the upstream end (beginning) of the merge taper to the downstream end (end) of the merge taper.
- 8.b) Type C Barricade Warning Lights may be used at night to delineate the edge of the travel way.
- 8.c) Type B Barricade Warning Lights shall be used on post-mounted advanced warning signs.

9. Use of Portable Changeable Message Signs (PCMS)

- 9.a) On limited access roadways, one PCMS shall be used in advance of the traffic control pattern for all lane closures. Prior to installing the pattern, the PCMS shall be installed and in operation, displaying the appropriate lane closure information. The PCMS shall

be positioned ½ to 1 mile ahead of the start of the lane closure taper. If the distance to the nearest exit ramp is greater than the specified ½ to 1 mile distance, then an additional PCMS shall be positioned a sufficient distance ahead of the exit ramp (and before the previous on-ramp where practical) to alert motorists to the work and therefore offer them an opportunity to take the exit.

- 9.b) On non-limited access roadways, the use of PCMS for lane closures is optional. The roadway geometry, sight line distance, and traffic volume shall be considered in the decision to use the PCMS.
- 9.c) PCMS should be placed off the shoulder of the roadway and behind a traffic barrier, if practical. Where a traffic barrier is not available to shield the PCMS, it should be placed off the shoulder and outside of the clear zone. If a PCMS has to be placed on the shoulder of the roadway or within the clear zone, it should be placed on the paved shoulder with a minimum of five traffic drums placed in a taper in front of it to delineate its position. The taper shall meet minimum distance requirements for a shoulder closure. The PCMS shall be protected if it is used for a continuous duration of 36 hours or more.
- 9.d) The PCMS shall be removed from the clear zone and have the display screen cleared and turned 90 degrees away from the roadway when the PCMS is no longer required.
- 9.e) The PCMS should not be used within 1,000 feet of an existing PCMS or Variable Message Sign (VMS).
- 9.f) A PCMS message shall:
 - i. consist of no more than two phases;
 - ii. contain no more than three lines of text per phase;
 - iii. have no more than eight characters per line, including spaces.
- 9.g) The PCMS should be used for specific situations that need to command the motorist's attention which cannot be conveyed with standard construction signs. The PCMS should not be used for generic messages (ex.: Road Work Ahead, Bump Ahead, Gravel Road, etc.) or for messages that need to be displayed for long periods of time, such as during stage construction. These types of messages should be displayed with construction signs. Special signs shall be coordinated with the Office of Construction and the Division of Traffic Engineering for the proper layout/dimensions required.
- 9.h) Typical messages that are allowed on the PCMS are shown below. Approval must be received from the Office of Construction for any message(s) different than the typical messages shown in Figure 1.
- 9.i) All messages shall comply with the information provided in Tables 2 and 3.

	<u>Phase 1</u>	<u>Phase 2</u>	<u>Message No.</u>	<u>Phase 1</u>	<u>Phase 2</u>
1	LEFT LANE CLOSED	MERGE RIGHT	9	LANES CLOSED AHEAD	REDUCE SPEED
2	2 LEFT LANES CLOSED	MERGE RIGHT	10	LANES CLOSED AHEAD	USE CAUTION
3	LEFT LANE CLOSED	REDUCE SPEED	11	EXIT XX CLOSED	USE EXIT YY
4	2 LEFT LANES CLOSED	REDUCE SPEED	12	EXIT XX CLOSED USE YY	FOLLOW DETOUR
5	RIGHT LANE CLOSED	MERGE LEFT	13	2 LANES SHIFT AHEAD	USE CAUTION
6	2 RIGHT LANES CLOSED	MERGE LEFT	14	3 LANES SHIFT AHEAD	USE CAUTION
7	RIGHT LANE CLOSED	REDUCE SPEED			
8	2 RIGHT LANES CLOSED	REDUCE SPEED			

Figure 1: Typical PCMS Messages

Table 2: Acceptable Abbreviations

Word Message	Standard Abbreviation	Word Message	Standard Abbreviation
Access	ACCS	Minimum	MIN
Afternoon / Evening	PM	Minor	MNR
Ahead	AHD	Minute(s)	MIN
Alternate	ALT	Monday	MON
Avenue	AVE, AV	Morning / Late Night	AM
Bicycle	BIKE	Mount	MT
Blocked	BLKD	Mountain	MTN
Boulevard	BLVD	National	NATL
Bridge	BR	Normal	NORM
CB Radio	CB	North	N
Center	CTR	Northbound	NBND
Center	CNTR	Oversized	OVRSZ
Chemical	CHEM	Parking	PKING
Circle	CIR	Parkway	PKWY
Compressed Natural Gas	CNG	Pavement	PVMT
Condition	COND	Pedestrian	PED
Congested	CONG	Place	PL
Construction	CONST	Pounds	LBS
Court	CT	Prepare	PREP
Crossing	XING	Quality	QLTY
Crossing (other than highway-rail)	XING	Right	RT
Downtown	DWNTN	Road	RD
Drive	DR	Roadwork	RDWK
East	E	Route	RT, RTE
Eastbound	EBND	Saint	ST
Electric Vehicle	EV	Saturday	SAT
Emergency	EMER	Service	SERV
Entrance, Enter	ENT	Shoulder	SHLDR
Exit	EX	Slippery	SLIP
Express	EXP	South	S
Expressway	EXPWY	Southbound	SBND
Feet	FT	Speed	SPD
Freeway	FRWY, FWY	State, county, or other non-US or non-Interstate numbered route	[Route Abbreviation determined by highway agency]**
Friday	FRI	Street	ST
Frontage	FRNTG	Sunday	SUN
Hazardous	HAZ	Telephone	PHONE
Hazardous Material	HAZMAT	Temporary	TEMP
High Occupancy Vehicle	HOV	Terrace	TER
Highway	HWY	Thruway	THWY
Highway-Rail Grade Crossing	RR XING	Thursday	THURS

Hospital	HOSP	Tons of Weight	T
Hour(s)	HR, HRS	Traffic	TRAF
Information	INFO	Trail	TR
International	INTL	Travelers	TRVLRS
Interstate	I-	Tuesday	TUES
Junction / Intersection	JCT	Turnpike	TPK
Lane	LN	Two-Way Intersection	2-WAY
Left	LFT	Two-Wheeled Vehicles	CYCLES
Liquid Propane Gas	LP-GAS	Upper	UPR
Local	LOC	US Numbered Route	US
Lower	LWR	Vehicle(s)	VEH, VEHS
Maintenance	MAINT	Warning	WARN
Major	MAJ	Wednesday	WED
Maximum	MAX	West	W
Mile(s)	MI	Westbound	WBND
Miles Per Hour	MPH		

** A space and no dash shall be placed between the abbreviation and the number of the route.

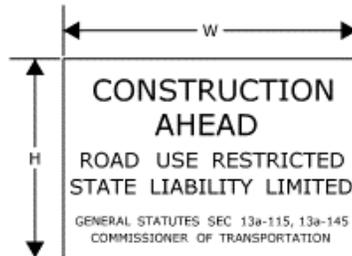
Table 3: Unacceptable Abbreviations

Unacceptable Abbreviation	Intended Word	Common Misinterpretation
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (Merge)
LT	Light (Traffic)	Left
PARK	Parking	Park
POLL	Pollution (Index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
WRNG	Warning	Wrong

10. Use of State Police Officers

- 10.a) State Police may be used only on limited access highways and secondary roadways that are under their primary jurisdiction. A minimum of one Officer may be used per critical sign pattern; however, a State Police presence is not required. Shoulder closures and right lane closures can generally be implemented without the presence of a State Police Officer. Left lane closures may also be implemented without State Police presence in areas with only moderate traffic and wide, unobstructed medians. It may be desirable to have a State Police presence, when available, under specific situations, such as nighttime lane closures; left lane closures with minimal width for setting up advance signs and staging; lane and shoulder closures on turning roadways/ramps or mainline where sight distance is minimal; and closures where extensive turning movements or traffic congestion regularly occur; however, they are not required.
- 10.b) If a State Police presence is provided, once the pattern is in place, the State Police Officer should be positioned in a non- hazardous location in advance of the pattern to provide advance warning to the motorist. If traffic backs up beyond the beginning of the pattern, then the State Police Officer shall reposition so that they are located prior to the backup. The State Police Officer should not be located immediately behind or within the roll ahead area of any TMA or within the work zone buffer area. The State Police Officer shall not be positioned in such a way that the State Police Officer obstructs any construction warning signs or PCMS from view of the motorist.
- 10.c) Other functions of the State Police Officer(s) may include:
- i. Assisting construction vehicles entering and exiting the work area.
 - ii. Enforcement of motor vehicle laws within the work area, if specifically requested by the Engineer.
- 10.d) State Police Officers assigned to a work site shall take direction from the Engineer.

SERIES 16 SIGNS



		W	H
16-E	80-1605	84" x 60"	
16-H	80-1608	60" x 42"	
16-M	80-1613	30" x 24"	

		W	H
16-S	80-1619	48" x 30"	

SIGN 16-S SHALL BE USED ON ALL PROJECTS THAT REQUIRE SIDEWALK RECONSTRUCTION OR RESTRICT PEDESTRIAN TRAVEL ON AN EXISTING SIDEWALK.

SERIES 16 SIGNS SHALL BE INSTALLED IN ADVANCE OF THE TRAFFIC CONTROL PATTERNS. SERIES 16 SIGNS SHOULD BE LOCATED TO ALLOW MOTORISTS THE OPPORTUNITY TO AVOID A WORK ZONE. SERIES 16 SIGNS SHOULD BE INSTALLED ON MAJOR INTERSECTING ROADWAYS THAT APPROACH THE WORK ZONE. ON LIMITED-ACCESS HIGHWAYS, THESE SIGNS SHOULD BE LOCATED IN ADVANCE OF THE NEAREST UPSTREAM EXIT RAMP AND ON ANY ENTRANCE RAMPS PRIOR TO OR WITHIN THE WORK ZONE LIMITS.

SIGNS 16-E AND 16-H SHALL BE POST-MOUNTED.

SIGN 16-E SHALL BE USED ON ALL FREEWAYS AND EXPRESSWAYS.

SIGN 16-H SHALL BE USED ON ALL RAMPS, OTHER STATE ROADWAYS AND MAJOR TOWN/CITY ROADWAYS.

SIGN 16-M SHALL BE USED ON OTHER TOWN ROADWAYS.

CONSTRUCTION TRAFFIC CONTROL PLAN
SERIES 16 SIGNS

SCALE: NONE

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED

Tracy L. Fogarty
PRINCIPAL ENGINEER

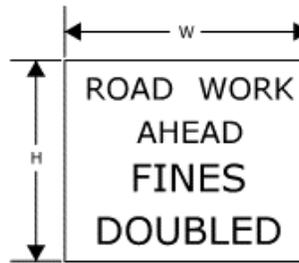
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REGULATORY SIGN "ROAD WORK AHEAD, FINES DOUBLED"

THE REGULATORY SIGN "ROAD WORK AHEAD FINES DOUBLED" SHALL BE INSTALLED FOR ALL WORK ZONES THAT OCCUR ON ANY STATE HIGHWAY AND MUNICIPAL ROAD IN CONNECTICUT WHERE THERE ARE WORKERS PRESENT ON THE HIGHWAY.

THE "ROAD WORK AHEAD FINES DOUBLED" REGULATORY SIGN SHALL BE PLACED AFTER THE SERIES 16 SIGN AND IN ADVANCE OF THE "ROAD WORK AHEAD" SIGN.

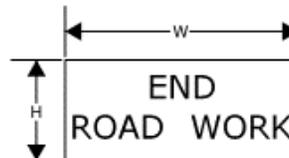
	W	H
31-1906	48"	42"
31-1907	60"	54"



"END ROAD WORK" SIGN

THE LAST SIGN IN THE PATTERN SHALL BE THE "END ROAD WORK" SIGN.

	W	H
80-9606	36"	18"
80-9612	48"	24"



CONSTRUCTION TRAFFIC CONTROL PLAN
**ROAD WORK AHEAD
SIGNS**

SCALE: NONE

NOTES FOR TRAFFIC CONTROL PLANS

1. IF A TRAFFIC STOPPAGE OCCURS IN ADVANCE OF SIGN (A), THEN AN ADDITIONAL SIGN (A) SHALL BE INSTALLED IN ADVANCE OF THE STOPPAGE.
2. SIGNS (AA), (A), AND (D) SHOULD BE OMITTED WHEN THESE SIGNS HAVE ALREADY BEEN INSTALLED IN ADVANCE TO DESIGNATE A LARGER WORK ZONE THAN THE WORK ZONE THAT IS ENCOMPASSED ON THIS PLAN.
3. SEE TABLE 1 FOR ADJUSTMENT OF TAPERS IF NECESSARY.
4. TRAFFIC CONES AND PORTABLE CONSTRUCTION SIGNS SHALL NOT BE LEFT UNATTENDED.
5. ALL CONFLICTING SIGNS WITHIN THE LIMITS OF A ROADWAY / LANE CLOSURE AREA SHALL BE COVERED WITH AN OPAQUE MATERIAL WHILE THE CLOSURE IS IN EFFECT, AND UNCOVERED WHEN THE ROADWAY / LANE CLOSURE IS RE-OPENED TO ALL LANES OF TRAFFIC.
6. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 48 HOURS, THEN ANY EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED OR COVERED, AND TEMPORARY PAVEMENT MARKINGS THAT DELINEATE THE PROPER TRAVELPATHS SHALL BE INSTALLED.
7. DISTANCES BETWEEN SIGNS IN THE ADVANCE WARNING AREA MAY BE REDUCED TO 100' ON LOW-SPEED URBAN ROADS (SPEED LIMIT \leq 40 MPH).
8. IF THIS PLAN IS TO REMAIN IN OPERATION FROM SUNSET TO SUNRISE, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
9. A PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF MILE TO ONE MILE IN ADVANCE OF THE LANE CLOSURE TAPER.
10. SIGN (P) SHALL BE MOUNTED A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.

TABLE 1 - MINIMUM TAPER LENGTHS

POSTED SPEED LIMIT (MILES PER HOUR)	MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE
30 OR LESS	180'
35	245'
40	320'
45	540'
50	600'
55	660'
65	780'

CONSTRUCTION TRAFFIC CONTROL PLAN

NOTES

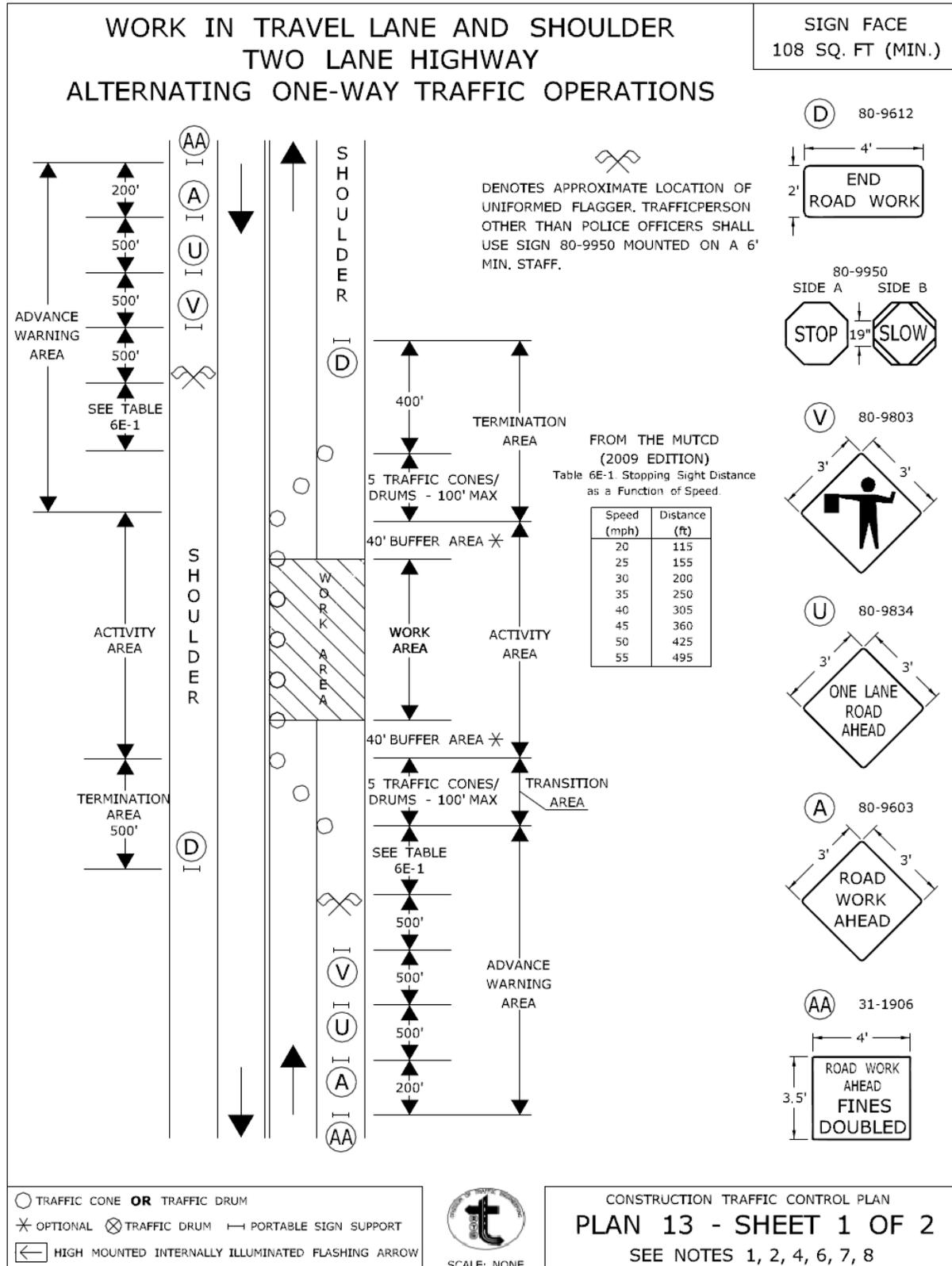
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BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED

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Tracy L. Fogarty, P.E.
2019.05.13 06:47:47-04107



- TRAFFIC CONE OR TRAFFIC DRUM
- ✱ OPTIONAL ✕ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ◀ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW



SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 1 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED *Charles S. Harlow* Charles S. Harlow
2012.06.05 15:55:23-04'00"
PRINCIPAL ENGINEER

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE
108 SQ. FT (MIN.)

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.



B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FLAGGER SHALL MOTION WITH THE FREE HAND FOR ROAD USERS TO PROCEED.



C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.



- TRAFFIC CONE **OR** TRAFFIC DRUM
- * OPTIONAL ⊗ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ◀ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

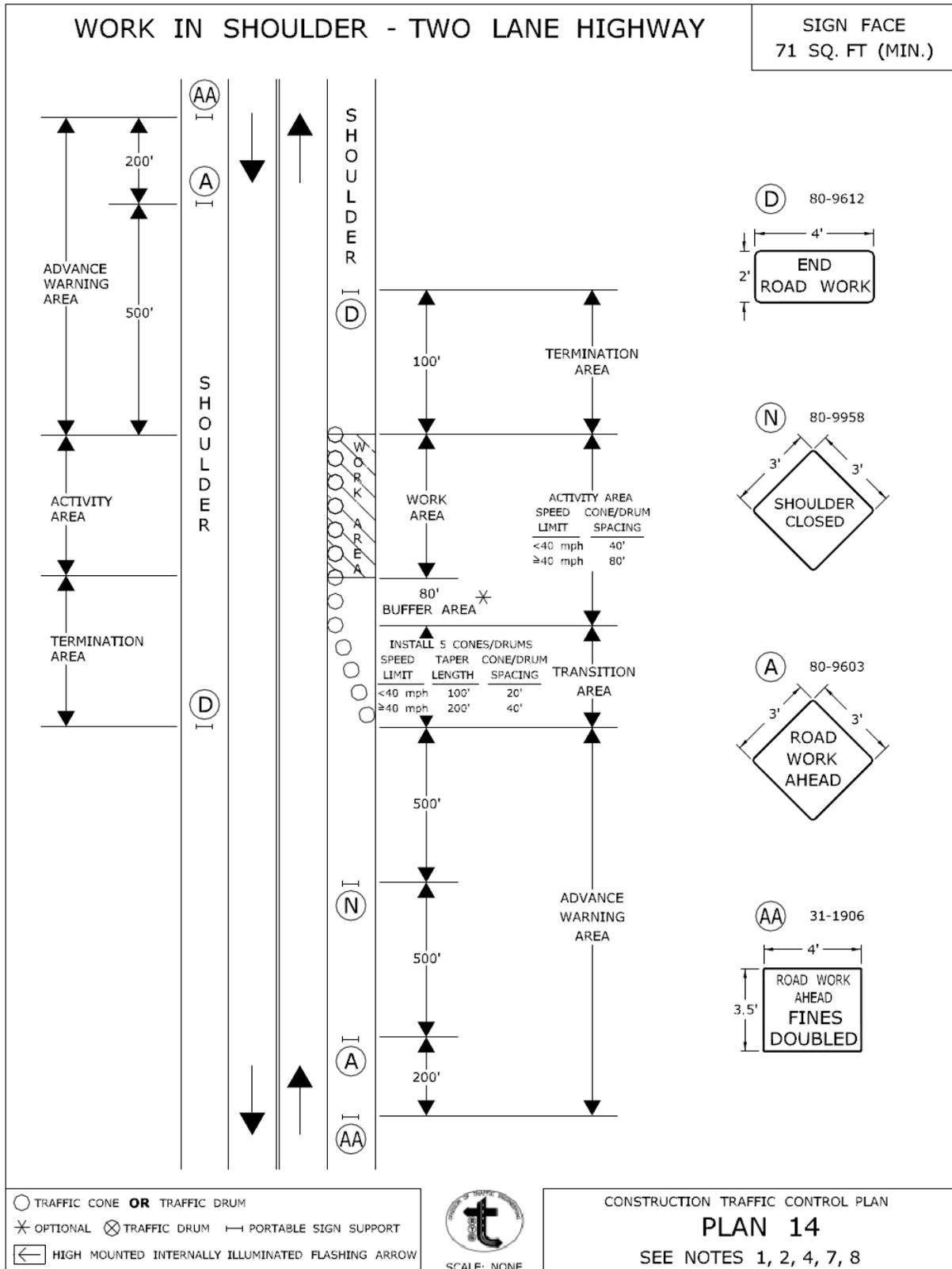


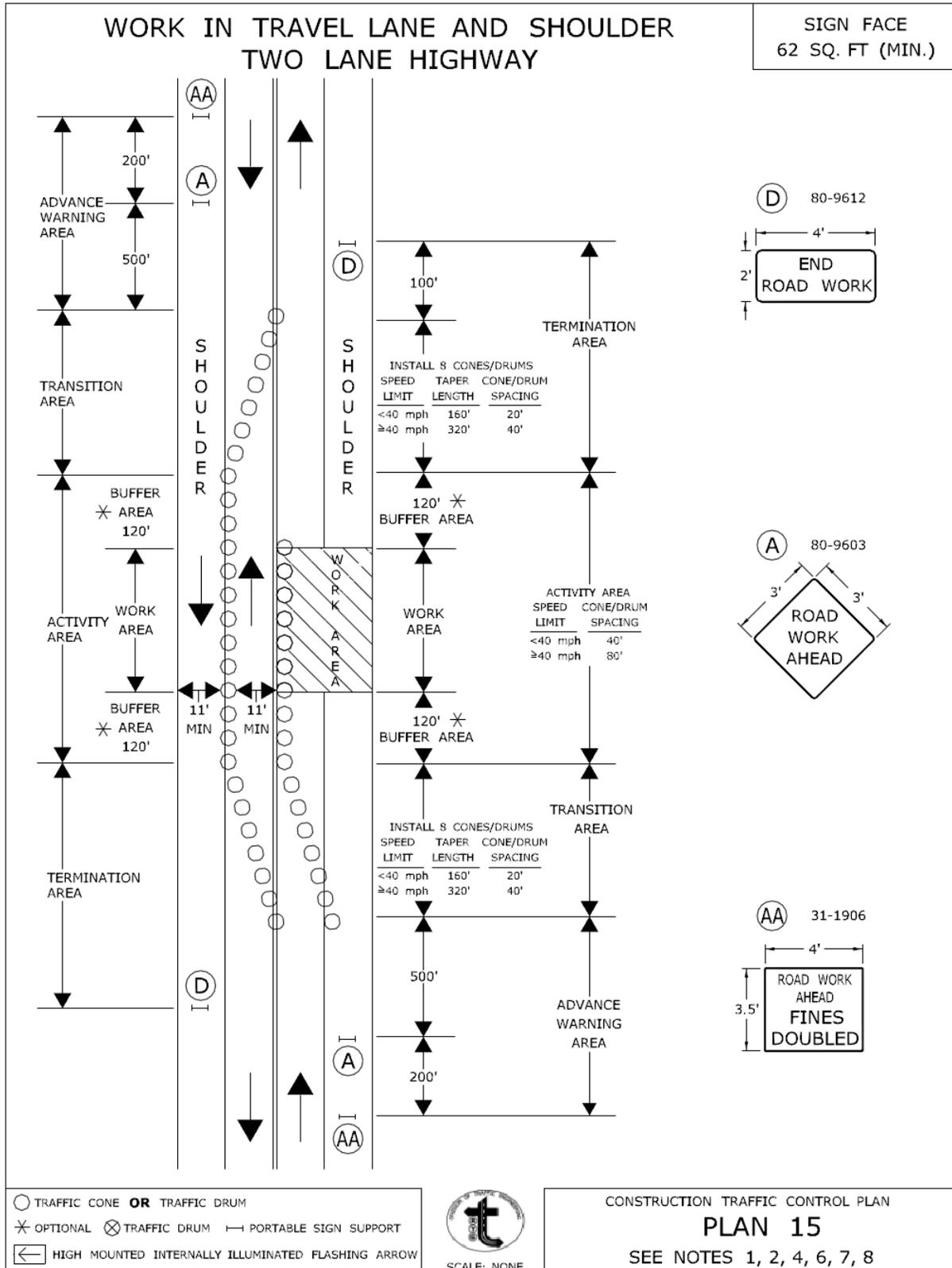
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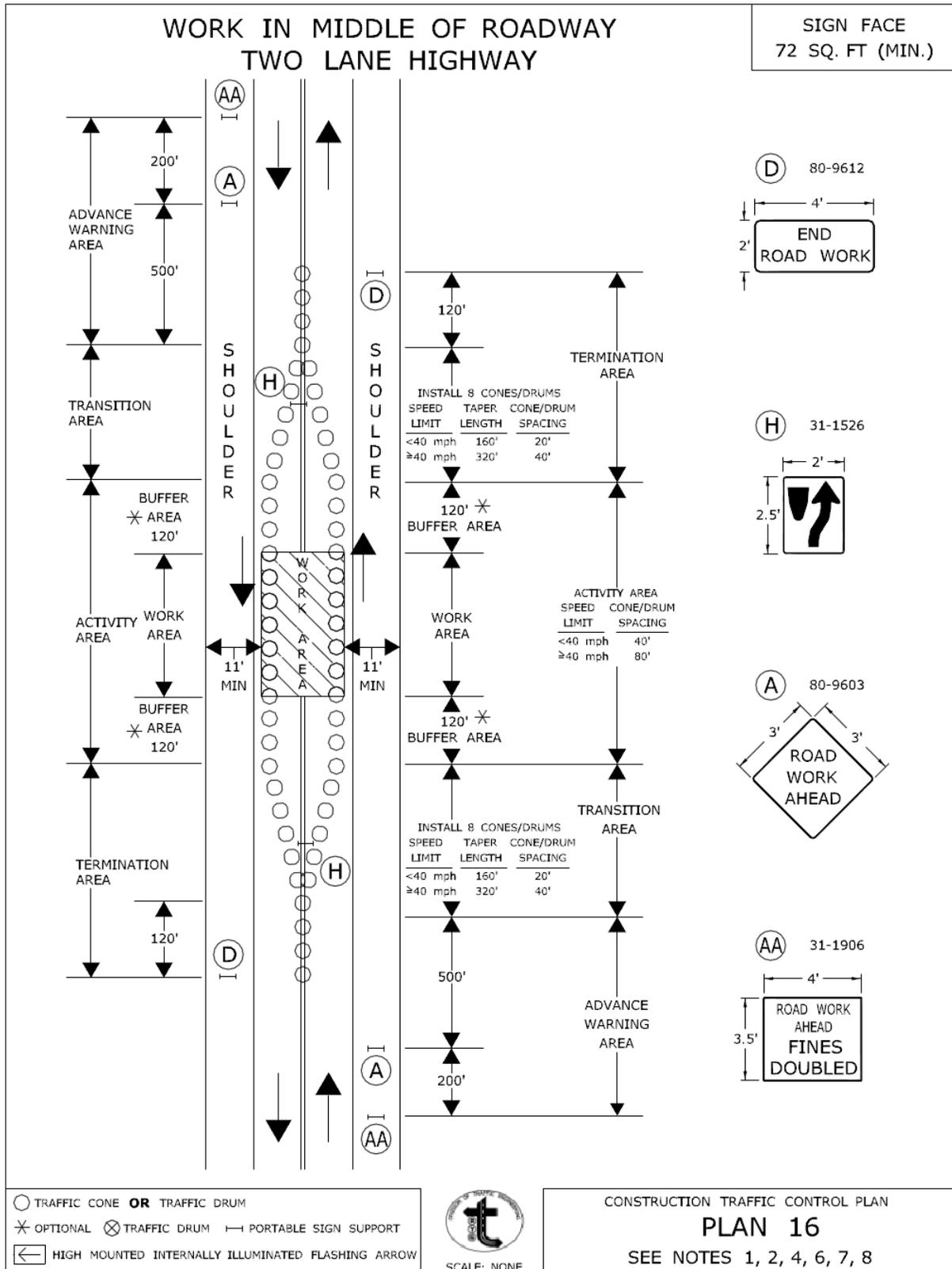
CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

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Charles S. Harlow
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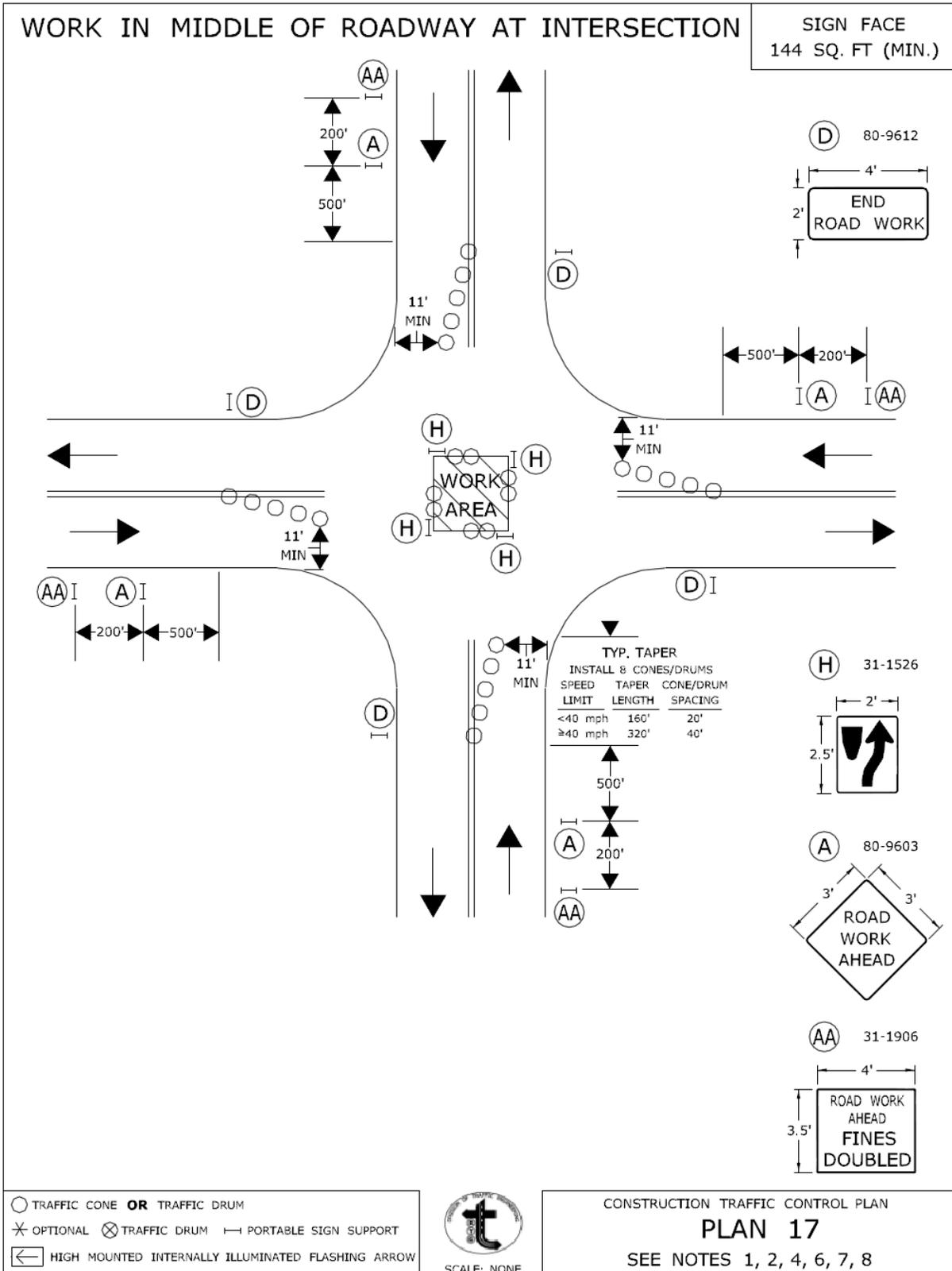






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PRINCIPAL ENGINEER
Charles S. Harlow
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- TRAFFIC CONE **OR** TRAFFIC DRUM
- ✱ OPTIONAL ⊗ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ← HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

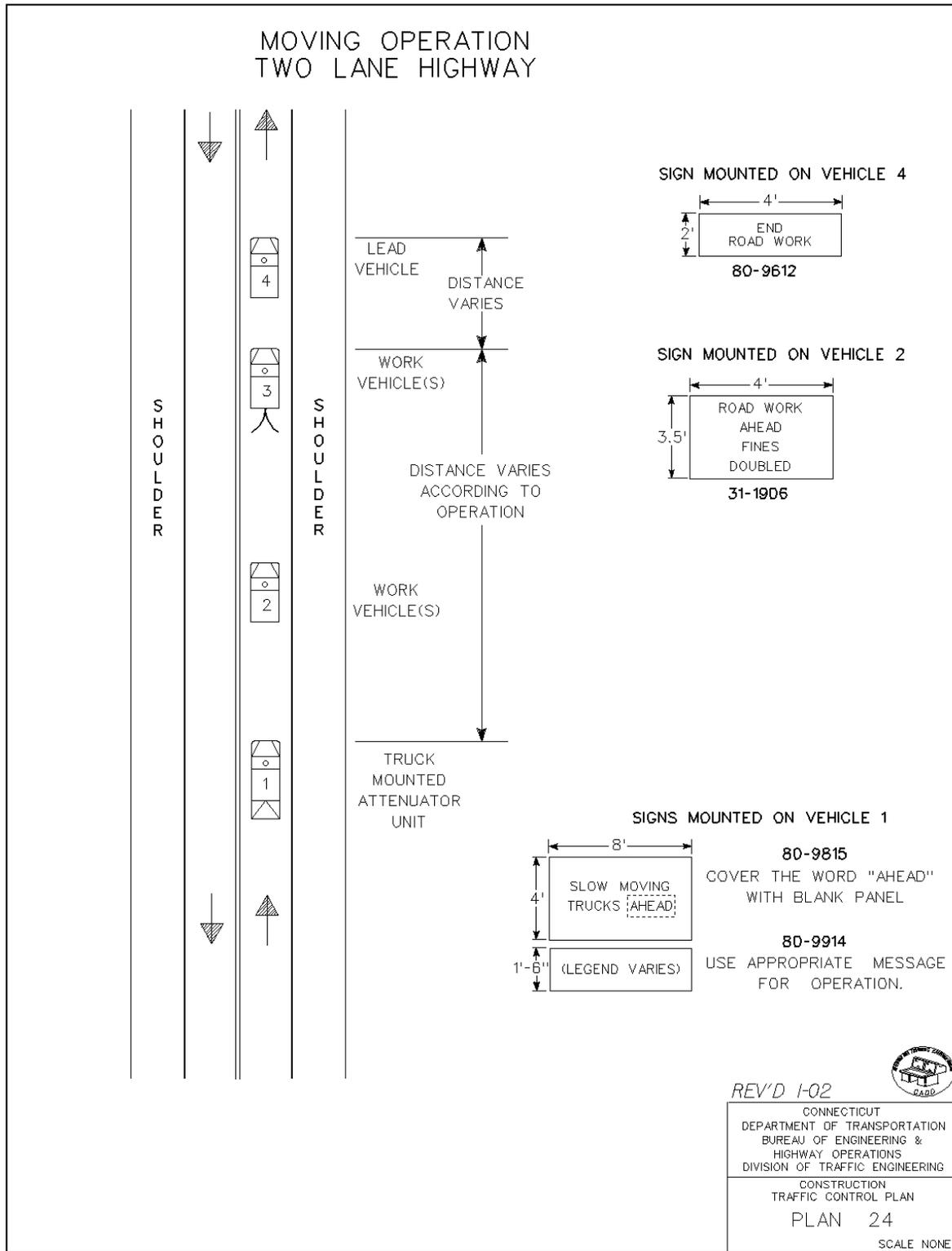


SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 17
SEE NOTES 1, 2, 4, 6, 7, 8

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PRINCIPAL ENGINEER
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APPROVED John D. McCall DATE 1-30-02
PRINCIPAL ENGINEER

Article 9.71.05 – Basis of Payment *is supplemented by the following:*

The temporary relocation of signs and supports, and the furnishing, installation and removal of any temporary supports shall be paid for under the item “Maintenance and Protection of Traffic”. Temporary overhead sign supports and foundations shall be paid for under the appropriate item(s).

The cost of furnishing, installing, and removing the material for the 4H:1V traversable slope shall be paid for under the item “Maintenance and Protection of Traffic”.

ITEM #0979004A – CONSTRUCTION BARRICADE DETECTABLE

Section 9.79 is supplemented and amended as follows:

09.79.01—Description:

Replace the entire Article with the following:

Under this item the Contractor shall furnish all Construction Barricade Detectable required on the Project as stated in the item “Maintenance and Protection of Traffic,” as shown on the plans, and as directed by the Engineer.

The Construction Barricade Detectable shall conform to the following:

1. have continuous detectable bottom and top surfaces able to be detected by a person with a visual disability traveling with the aid of a long cane;
2. the bottom of the bottom surface shall be no higher than 2 inches above the ground;
3. the top of the top surface shall be no lower than 32 inches above the ground;
4. the requirements of the 2016 AASHTO MASH.

09.79.02—Materials:

Delete the last sentence and add the following:

Prior to using Construction Barricade Detectable on the Project, the Contractor shall submit to the Engineer a copy of the Eligibility Letter issued by the FHWA to the manufacturer documenting that the barricades comply with the requirements of the 2016 AASHTO MASH and are eligible for reimbursement under the Federal-aid highway program.

Pay Item

Construction Barricade Detectable

Pay Unit

ea.

ITEM #0992093A – REMOVE AND RESET BRICK PAVERS

3.03.01 – Description: This item shall consist of removing and resetting existing brick pavers and border timbers on a base of compacted process stone and stone dust including all excavation, removal and disposal of surplus material, processed stone base, stone dust, removal and placing of brick pavers, polymeric sand joint filler, cutting of brick pavers, labor, materials, tools, and equipment necessary to remove and reset the existing brick pavers in the locations indicated on the plans or as directed by the Engineer.

3.03.02 - Materials:

Processed Stone Base: The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 818, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall not be used.

Stone dust: Shall be native blue-grey crushed trap rock conforming to Form 818, Article M.01.03 Gradation: “dust”.

Polymeric Sand Joint Filler: Shall be as manufactured by: The Quikrete Companies Atlanta, Georgia 30305 www.quikrete .com, Sakrete of North America Charlotte, North Carolina www.Sakrete.com, or approved equal.

3.03.03 – Construction Methods: The Contractor shall carefully remove existing brick pavers and timbers and stockpile them adjacent to the work area for reuse. Within the work area, any unsuitable material found under the bricks shall be removed. Process stone shall then be added to the surface of the existing base course and the area fine graded and compacted as required to create a firm, evenly graded surface. The Contractor shall then place a layer of stone dust 1” in thickness on the properly prepared processed stone base. The stone dust setting course shall be thoroughly compacted and present a hard smooth surface. After the stone dust has been properly prepared, Brick Pavers shall be placed at the final grades. The brick shall be placed tightly. The Contractor shall place the polymeric sand joint filler into all joints according to manufacturer specifications ensuring sand is completely installed to the full depth of the brick pavers.

3.03.04 - Method of Measurement: This work shall be measured by the actual number of square feet of Remove and Reset Brick Pavers completed and accepted.

3.03.04 - Basis of Payment: This work shall be paid for at the contract unit price per square foot, complete in place, which price shall include all required excavation and disposal of surplus material, furnishing and placing brick pavers, processed stone base, stone dust, compaction, polymeric sand joint filler, cutting of brick pavers, equipment, tools, materials and labor incidental thereto.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
0992093A	REMOVE AND RESET BRICK PAVERS	S.F.

ITEM #1002291A - MODIFICATION OF TRAFFIC CONTROL FOUNDATION

Description:

This item shall consist of modifying existing traffic control foundation of the type specified at the locations shown on the plans or as directed by the Engineer and in conformity with these special provisions.

Materials:

Concrete replacement shall be Class "A" concrete conforming to Section M.03 and for Rigid Metal Conduit, Article M.15.09.

Concrete bonding compound shall be of an approved type as directed by the Engineer.

Construction Methods:

All work shall be in accordance with the following procedure or as directed by the Engineer.

- a) Remove concrete foundation by cutting, chiseling or any other method approved by the Engineer as required to install new conduit sweeps.
- b) Position new conduit sweeps, and apply an approved concrete bonding compound on the exposed concrete surfaces as recommended by the manufacturer.
- c) Forms shall be positioned so that all existing exposed foundation at grade level or above will be matched. All work shall be in accordance with Section 6.01.
- d) Allow concrete to cure and backfill as indicated on the details.

When all conduits, existing and new, are used, one additional 50mm (2") rigid metal conduit sweep shall be installed as a spare. Existing conduits that will be abandoned shall be cut and capped approximately two feet from the foundation.

Surfaces, new and existing, of a foundation which is modified, shall be "Grout Clean-Down Finish" as described in Section 6.01.

Where a foundation is modified within or adjacent to a concrete sidewalk, unless otherwise directed by the Engineer, the entire section of sidewalk shall be replaced in accordance with Section 9.21.

Method of Measurement:

The work for this item shall be measured for payment by the number of foundations modified.

Basis of Payment:

This work will be paid for at the contract unit price each for "Modification Of Traffic Control Foundation", which price shall include all costs for cutting of bases, bonding compound, forms, concrete, conduit sweeps, and all fittings, material, equipment, labor and tools incidental thereto.

All concrete sidewalk replaced due to foundation modification shall be paid for at the contract unit price for "Concrete Sidewalk".

<u>Pay Item</u>	<u>Pay Unit</u>
Modification of Traffic Control Foundation	Ea.

ITEM #1003680A – ORNAMENTAL LIGHTING SYSTEM

Work under this item shall conform to the requirements of Section 10.00 and 11.13 of the Standard Specifications, amended and supplemented as follows:

Description:

The work under this item shall consist of furnishing and installing a complete ornamental streetlight system at the locations and to the dimensions and details shown on the plans or as directed by the Engineer and in conformity with these specifications. The work shall include furnishing and installing all necessary components of the system including light poles and fixtures of the height and type specified with pole and LED fixture, integral driver, conductors from the fixture and GFI outlet to the branch circuit in the pole base, fusing, handhole, anchor bolts and cover, tag, grounding wire, trenching and conduits, conductors, connections, power and control cable, lighting controller, controller foundation, metered service, bedding, backfill, aluminum shims and non-shrink grout, light pole concrete foundations, anchor bolts, grounding wire, conduit, ground rod, pull boxes and connections complete in place, at the locations, and as described herein, and to the dimensions and details shown on the plans or as directed by the Engineer for a complete lighting system. The ornamental streetlights shall have an I.E.S. upright rating equal to zero.

Materials:

The materials for this work shall conform to the following requirements:

1. Ornamental Lighting System:
 - a. Luminaire shall be as manufactured by Spring City Electrical and Manufacturing Company, Spring City, PA, Luminaire Model: Jefferson, Luminaire No.: ALMJFF-LE030-2F3-30-CR3-CU, gloss black. Refer to Sheet C-903 on drawings.

This is an approved proprietary item; no substitutions will be allowed.

- b. Pole shall be as manufactured by Hapco, Pole Model: Homewood, Pole Height: 9', Catalog No.: HOC09B5-4-TF12BA, gloss black. Refer to Sheet C-903 on drawings.

This is an approved proprietary item; no substitutions will be allowed.

2. Lamps shall be LED.

3. Anchor Bolts: Light Standards shall use four ¾” diameter, hot-dipped galvanized “L” type anchor bolts in accordance with the requirements of ASTM A-153-03, Class C. Field welding and field bending of anchor bolts is prohibited.
4. The fixtures shall be wired using No. 10 AWG stranded copper conductors with 600V, 167-degree F, type THHN/THWN insulation, or as required by the manufacturer. The luminaire shall be connected to the wiring provided within the pole.
5. Cable: The provisions of Sections 10.12.02 and 10.15.02 shall apply.
6. Conduit: The provisions of Sections 10.01.02 and 10.08.02 shall apply.
7. Bedding: the provisions of Section 10.01.02 shall apply.
8. Concrete Handhole:
 - a. The Precast Polymer Concrete Handhole shall be fabricated from polymer concrete using selectively graded aggregates in combination with polymer resin. The pre-cast polymer concrete shall be reinforced with woven sheet fiberglass. The polymer concrete shall be corrosion resistant and impact resistant. The polymer concrete handhole shall meet or exceed the test provisions of ANSI/SCTE-77 TIER 15, WUC 3.6 and shall be UL listed to the ANSI 77 National Standard as referenced in the 2017 NEC. The handhole shall be rated for ANSI Tier 15.
 - b. The overall handhole depth shall be 30” comprised of two separate stackable handholes of 12” and 18” depth. The approximate inside dimensions shall be 11” x 18”. Both handholes shall have an open bottom and the 18” deep handhole shall have one 6” x 8” mouse hole at each 11” end.
 - c. The Precast Polymer Concrete Handhole shall be Old Castle H-Series, Hubbell Quazite PG series, or approved equal.
 - d. Cover shall be polymer concrete, one piece, with pull slots and stainless steel hex head hold-down bolts/washers (minimum 3/8” – 16 UNC). The cover shall have a cast logo which shall read: “LIGHTING.”. The cover shall have a skid resistant surface and be rated for ANSI/SCTE-77 Tier 15. The cover shall have the Tier level rating embossed on the surface. The cover shall be manufactured by the same manufacturer as the handhole. The cover shall be equipped with a steel lifting “J-hook” which shall be turned over to the Engineer.
 - e. The color shall be “cement gray”

9. Light Pole Foundations: The provisions of Section 10.02.02 shall apply.

10. Service Control Box: The provisions of Section 10.17.02 shall apply.

Construction Methods:

Construction methods for this work shall be in accordance with the manufacturer's recommendations. The Contractor shall be responsible for coordinating all necessary prerequisite work with the utility company and the Town of Ridgefield. This shall include, but not be limited to, energizing new light poles, coordinating and verifying new conduit installations, and coordinating and verifying the location of the service control box.

Eversource shall be responsible for pulling new wiring from energy source to service control box location and energizing new lighting system. The Contractor shall be responsible for all installation between the service control box and the remainder of the ornamental lighting system.

The Contractor shall be responsible for all coordination with the Utility company that is required to obtain the required metered service connection to the lighting system. This includes any necessary computations, applications, and fees paid on the behalf of the Town of Ridgefield.

The Contractor shall be responsible for installing the poles plumb, connection to the power supply, wiring, attaching the ground connection to the pole, and all testing.

For trenching and backfilling the provisions within sections 10.01.01 and 10.01.03 shall apply.

REQUIRED SUBMITTALS:

The Contractor is responsible for providing the complete lighting design to provide an operational lighting system as shown on the plans and these specifications. The design will include selecting the appropriate load and service equipment to be installed in the service control box, selection of the control box and foundation, and design of all lighting circuits, including cable routing and sizing to supply the luminaires and GFI receptacles at each pole. Structural design computations are to be provided for each pole to demonstrate adequacy of the pole, foundation, and anchor bolt design, taking into account loading produced by the pole accessories, in accordance with AASHTO Standard Specification for Structural Support of Highway Signs, Luminaires, and Traffic Signs. Wind pressures for design purposes shall be determined in accordance with the above AASHTO Standard utilizing a 90-mph wind speed. Details provided with the plans are for guidance only and may be modified as necessary to provide adequate design to meet AASHTO requirements. Proposed modifications should be provided with the design submittal.

All electrical calculations, structural calculations, working drawings, shop drawings, and catalog cuts shall be submitted to the Engineer in a single submittal package for review and approval. The submittal shall demonstrate the adequacy of the design and the adherence to the details provided. The assembly, in its completed form, shall meet the design requirements and style as shown on the plans.

Following approval of the design, the equipment can be ordered. Submit 5 copies of material certificates in accordance with the contract general requirements.

Method of Measurement:

This work will not be measured for payment and the cost thereof shall be included in the lump sum cost of the item "Ornamental Lighting System".

Basis of Payment:

This work will be paid for at the Contract lump sum price for the Ornamental Lighting System, complete in place, which price shall include all work and materials, including design, light fixture/poles, foundations, excavation, GFI receptacles, lamps, integral LED drivers, designated optional equipment, conductors, conduit, warning tape, tags, photoelectric controls, handholes, trenching, bedding, and backfilling, fusing, washers, nuts, bolts, bolt covers, grounding, shims, service controller units, cabinets and foundations, service connections, permits, coordination,

non-shrink grout, connections and all equipment, materials, tools and labor incidental thereto, including pole certification.

Work performed by the utility companies for the purpose of installing the ornamental lighting system will be reimbursed to the utility company directly from the municipality.

<u>Pay Item</u>	<u>Pay Unit</u>
Ornamental Lighting System	LS

ITEM# 1008908A - CLEAN EXISTING CONDUIT

Description:

Clean existing conduit as required, as shown on the plans or as directed by the Engineer to remove dirt and debris to facilitate the installation of new cable.

Construction Methods:

Where cable is to be installed in existing conduit the conduit may have to be cleared prior to the installation. Cleaning will only be necessary if the new cable cannot be easily installed in the existing conduit. By field inspection, and with the concurrence of the Engineer, determine the sections of conduit that require cleaning.

Remove all existing cable from conduit. Install temporary cable elsewhere, as necessary, to maintain normal signalization complete with vehicle & pedestrian detection, EVPS, and coordination. Clean the conduit by one of the following methods:

- 1) Rodding.
- 2) A high pressure jet spray, or air pressure.
- 3) By pulling a mandrel or ball through the conduit.

Submit in writing the anticipated method of cleaning the conduit to the Engineer for approval prior to cleaning any conduit.

If the conduit is found damaged to any extent that the cleaning process will not clear the obstruction, it will be the judgment of the Engineer whether to replace the entire conduit run or excavate and replace only the damaged section.

If the existing conduit is found to be missing hardware such as bonding bushings and bond wire, the missing material shall be provided and installed under this item prior to installation of the cable.

Method of Measurement:

This work shall be measured from termination point to termination point. This work shall be measured for payment on actual number of linear feet.

Basis of Payment:

The work under the Item "Clean Existing Conduit" shall be paid for at the contract unit price per linear foot, which price shall include all material, tools, equipment, labor, and work incidental thereto. Work pertaining to temporary operation shall be paid for under Item 1108xxxxA - Temporary Signalization (Site X). Replacement of any damaged conduit shall be paid for under the applicable conduit item.

Pay Item	Pay Unit
Clean Existing Conduit	l.f.

ITEM #1010060A – CLEAN EXISTING CONCRETE HANDHOLE

DESCRIPTION:

Clean all debris from an existing concrete handhole where shown on the plans or as directed.

MATERIAL:

Insulated Bonding Bushings:
 Specification Grade
 Threaded
 Malleable Iron or Steel
 Galvanized
 UL listed
Bonding Wire:
 M.15.13
Grout:
 M.03.05

CONSTRUCTION METHODS:

Remove to a level even with the bottom of the handhole all sand, silt and other debris. Remove any material that is accessible from the ends of conduit. Additional conduit cleaning will be paid for under Item 1008908A-Clean Existing Conduit. Place approximately 4" of $\frac{3}{4}$ " crushed stone in bottom of handhole using care not to allow crushed stone to enter conduits. Grout around conduits to prevent future entrance of dirt and silt. Properly dispose all removed debris. Inspect bonding bushings. Tighten loose bushings. Secure loose bond connections. Install new bonding bushings on spare conduits and bond to other conduits.

METHOD OF MEASUREMENT:

This work will be measured for payment by the number of concrete handholes cleaned, complete and accepted.

BASES OF PAYMENT:

This work will be paid for at the contract unit price each for "Clean Existing Concrete Handhole", which price shall include the removal and disposal of debris from handhole and associated conduit, crushed stone, grout, bonding bushings, bonding wire, and all equipment and work incidental thereto.

<u>Pay Item</u>	<u>Pay Unit</u>
Clean Existing Concrete Handhole	Each

ITEM #1010905A – RESET CONCRETE HANDHOLE

Work under this item shall conform to applicable requirements of Section 10.10 of Form 818 amended as follows:

Article 10.10.01 - Description:

Replace entire paragraph with the following:

This item shall consist of resetting Traffic Handhole covers to finished grade where shown on the plans, or as directed by the Engineer.

Article 10.10.04 – Method of Measurement:

Replace entire paragraph with the following:

This work will be measured for payment by the number of handholes, and handhole covers of the type specified, complete, and accepted in place.

Article 10.10.05 – Basis of Payment:

Replace paragraph with the following:

This work will be paid for at the Contract price each for “Reset Concrete Handhole” reset in place, which price shall include all materials, concrete, steel cover, grounding tab, crushed stone, excavating, backfilling and replacement of bituminous sidewalk and pavement, including grading and placing topsoil, seeding, fertilizing, mulching and all equipment, tools, labor and work incidental thereto. All concrete sidewalk replaced due to handhole installation shall be paid for at the Contract unit price for “Concrete Sidewalk.” The ground wire (bonding wire) is included in the Contract unit price under Section 10.08 – Electrical Conduit.

Pay Item	Pay Unit
Reset Concrete Handhole	EA.

ITEM#1106001A- 1 WAY PEDESTRIAN SIGNAL POLE MOUNTED

ITEM#1106003A- 1 WAY PEDESTRIAN SIGNAL PEDESTAL MOUNTED

Section 11.06.02 Pedestrian Signal, Materials

Section M.16.07 C. Optical Unit

Delete 2. LED: and replace with the following:

General

- Meet requirements of current MUTCD Section 4E.
- Meet current ITE specifications for Pedestrian Traffic Control Signal Indications - (PTCSI) Part 2: Light Emitting Diode (LED).
- Meet CT DOT, 2008 - 2010 Functional Specifications for Traffic Control Equipment; Section 5D, LED Pedestrian Signal with Countdown Timer.
- Meet EPA Energy Star® requirements for LED Pedestrian Signal Modules.

Operational

- Countdown display only during the flashing Pedestrian Clearance (Ped Clr) Interval. Timer goes blank at end of flashing ped clr even if countdown has not reached zero.

Physical

- Sealed optical module to prevent entrance of moisture and dust.
- Self-contained optical module, including necessary power supplies.
- Designed to securely fit into standard housing without the use of special tools or modifications to the housing.
- Identification information on module: manufacturer's name, model number, serial number, and date code.

Optical

- Multiple LED sources; capable of partial loss of LED's without loss of symbol or countdown message.
- Two complete self contained optical systems. One to display the walking person symbol (walk) and the hand symbol (don't walk). One to display the countdown timer digits.
- Visual Image similar to incandescent display; smooth, non-pixelated.
- Symbol and countdown digit size as shown on the plan.
- Solid hand/person symbol; outline display not allowed.
- Overlaid hand/person symbols and countdown digits arranged side by side.
- Countdown digit display color: Portland Orange in accordance with ITE requirements.

- Countdown digits comprised of two seven segments, each in a figure 8 pattern.
- Photometric Requirements: Luminance, Uniformity, and Distribution in accordance with ITE requirements.
- Color Uniformity in accordance with ITE requirements.
- Blank-Out design; symbols and digits illegible even in direct sunlight when not illuminated.

Electrical

- Operating voltage: 89 VAC to 135 VAC.
- Low Voltage Turn-Off: 35 VAC.
- Turn-On and Turn-Off times in accordance with ITE specifications.
- Combined Hand – Countdown Digits wattage: ≥ 20 Watts.
- Input impedance at 60 Hertz sufficient to satisfy Malfunction Management Unit (MMU) requirements.
- Two separate power supplies. One to power the walking person symbol. One to power the hand symbol and the countdown digits.
- Meet Federal Communication Commission (FCC) regulations concerning electronic noise.
- Filtered and protected against electrical transients and surges.

Warranty

- Five years from date ownership is accepted.

ITEM #1107011A - ACCESSIBLE PEDESTRIAN SIGNAL AND DETECTOR (TYPE A)

Description:

Furnish and install an Accessible Pedestrian Signal and Detector (APS&D). The APS&D provides audio and tactile information to augment the visual pedestrian signal.

Type A provides a low frequency percussive tone or a speech message during the walk interval and is used where there is an exclusive or a concurrent pedestrian phase.

Material:

A. General:

- Conform to applicable sections of the current MUTCD Chapter 4E, Pedestrian Control Features as specified herein.
- All features fully operational when the traffic signal is in colors mode.
- All features non-operational when the traffic signal is in flash mode.
- Interchangeable with a non-accessible type pedestrian pushbutton with no modifications to the Controller Assembly (CA) or Controller Unit.
- Audible transducer integral with the APS&D housing, adjacent to the pushbutton.
- Operation programming method: Either or combination of:
 - Mechanically by dip switches or circuit board jumpers
 - Infrared remote-control hand-held device

B. Electrical:

- Metallic components either grounded or insulated to preclude an electrical hazard to pedestrians under all weather conditions.
- All features powered by the 110VAC Walk signal and the 110VAC Don't Walk signal so that additional conductors from the CA are not needed.

C. Audible Pushbutton Locator Tone

- Frequency: repeating tone at one (1) second intervals
- Tone duration: ≤ 0.15 seconds
- Volume:
 - Minimum setting of zero
 - Manually adjustable initial setting
 - Automatically adjusted after initial setting. Volume increased in response to a temporary increase in ambient noise and subsequently decreased with a decrease in ambient noise.
 - Maximum volume: 100 dBA which is the approximate sound pressure of a gasoline powered lawn mower nearby.
 - Automatic volume adjustment independent of other APS&Ds at the intersection.
 - May be disabled without affecting operation of other features.
- Silent only during walk interval. Active all other times.

D. Vibrotactile Arrow Pushbutton

- Pushbutton contained in a circular assembly which fits inside the housing and is attached to the housing with 4 screws.
- Actuation of pushbutton acknowledged by confirmation light.
- Actuation of pushbutton initiates speech message "Wait".

- ADA compliant: Size: ≥ 2.0 " (50) diameter, Actuation force: ≤ 5 ft-lb (22.2 N)
- Shape: Circular, raised slightly above housing so that it may be actuated with the back of a hand
- Tamper-proof, vandal-proof, weatherproof, freeze-proof, impact-resistant design and construction.
- Operation: Vibrates only during the walk interval (when the walk indication is displayed).
- Tactile Arrow:
 - Attached to surface of the button assembly by a tamperproof method.
 - Raised slightly above surface of pushbutton, minimum 0.125" (0.3)
 - Size: Length ≥ 1.5 " (38), Height ≥ 1.0 " (25)
 - Color: Sharp contrast to background color of pushbutton and housing

E. Audible Walk Interval

1. General:

- Operation independent of other APS&Ds at intersection.
- Active only during the walk interval (when the walk indication is displayed).
- Volume:
 - Minimum setting of zero
 - Manually adjustable initial setting
 - Automatically adjusted after initial setting. Volume increased in response to a temporary increase in ambient noise and subsequently decreased with a decrease in ambient noise.
 - Automatic volume adjustment independent of other APS&Ds at the intersection.
 - Maximum volume: 100 dBA which is the approximate sound pressure of a gasoline powered lawn mower nearby.
- Duration:
 - Default method: Automatically set by the duration of the visual walk signal display.
 - When selected: Manually set when rest-in-walk is used for a concurrent pedestrian movement.
- Audible sounds that mimic any bird call are not allowed.

2. Percussive Tone where called for on the signal plan:

- Repeating tone at eight (8) to ten (10) ticks per second.
- Tone frequency: Multiple frequencies with a dominant component at 880 Hz which creates a "tick - tick - tick..." sound.

3. Speech Message where called for on the signal plan:

- Clearly enunciate the name of the travel way to be crossed and the message that the walk signal is on for that crossing.. See signal plan for specific message.

F. Pushbutton Housing/Sign Frame/Sign

- One piece die cast aluminum meeting requirements of ASTM B85.
- Sign frame designed to accept 9" x 15" (230 x 380) four-hole advisory sign.
- Flat back to facilitate surface mount.
- Available brackets to either pedestal top-mount or pole side-mount on pole diameter range of 3½" (89) to 15" (380).
- Available brackets to allow mounting two (2) APS&Ds to the same 3½" (89) pole, facing ≥ 60 degrees apart, at the same height.
- Available extension bracket of a size indicated on the plan – 18" maximum.
- Wire entrance through the rear.

- Stainless steel mounting hardware.
- Sign: CT DOT Sign No. 31-0856

Construction Methods:

Install the APS&D according to the manufacturer’s instructions. Position the APS&D so the plane of the sign face is parallel to the crossing (sign is facing perpendicular) and the arrow is pointing in the same direction as the crossing, not necessarily at the ramp. Notify the Engineer if there is any discrepancy or ambiguity between the plans and field conditions that prevent placement of the APS&D as shown on the plan. Set the minimum sound levels of the locator tone and the audible walk indication when there is little or no ambient noise as in night time operation. Set the volume of audible walk indications and pushbutton locator tones to a maximum of 5dBA louder than ambient sound. The locator tone should be audible 6’ to 12’ (1.8 m to 3.6 m) from the pushbutton or to the building line, whichever is less. Confirm the volume of both audible walk indication and the locator tone increases with an increase in ambient sound and subsequently decreases when the ambient noise decreases.

If programming method is remote, by an infrared hand-held device, provide one device and operation manual for each intersection where APS&D is installed.

Method of Measurement:

This work is measured by the number of APS&Ds of the type specified, installed, tested, fully operational, and accepted.

Basis of Payment:

This item will be paid at the Contract unit price for each "Accessible Pedestrian Signal and Detector (Type A)" installed and accepted. Payment for this work is based on the installation, inspection, successful completion of the 30 day test period, and final acceptance of the Accessible Pedestrian Signal and Detector of the type specified. Payment includes the sign, mounting brackets for adjacent buttons on the same structure, extension brackets, all necessary cable, all incidental materials, labor, tools, and equipment necessary to complete the installation. Payment also includes the warrantee, installation manual, and operation manual.

If programming method is remote by an infrared hand-held device, the total bid price of all APS&Ds includes one remote programming device and accompanying operation manual for each intersection where APS&D is installed.

Pay Item	Pay Unit
Accessible Pedestrian Signal and Detector (Type A)	Each

ITEM #1108117A - FULL ACTUATED CONTROLLER W/ACTUATED PEDESTRIAN PHASE (16 PHASE)

Article 11.08.01 - Description: Delete the second paragraph and replace with the following:

This item shall consist of furnishing and installing an actuated ATC controller, which shall be a completely digital solid state unit, for controlling the operation of the traffic signals.

The controller shall be completely furnished with the number of phases called for in the item. The cabinet to house the controller shall be completely wired and all sub-bases shall be complete with load switches and flash relays as specified in the **Functional Specifications For Traffic Control Equipment**. The cabinet shall also have all necessary auxiliary equipment required to provide the sequence and timing indicated on the plans. A time switch shall be installed in each cabinet.

This item shall use ATC controllers for compatibility with the ATMS central management system that brings traffic network data into a single repository for a real-time, integrated view of traffic operation for central software currently used by the CTDOT.

Article 11.08.03 – Construction Methods: Delete the entire second and third paragraph.

Article M.16.09 - Controllers: Add the following sub-articles:

2. Actuated Controllers: The purpose of this sub-article is to set forth minimum design and operating requirements for the materials and components for a digitally timed actuated controller.

Ventilation:

For cabinets that will be painted other than Department-approved gray, the cabinet ventilation shall include two intakes, exhausts, filtrations, two fans, and one thermostat assembly. Each electric fan shall be equipped with ball or roller bearings and with a capacity of at least 100 cfm. The fans shall be mounted inside the front top of the cabinet ventilation holes. The fans shall be controlled by one manually adjustable thermostat.

The Connecticut Department of Transportation Functional Specifications for Traffic Control Equipment, current edition governs the material for the Controller Assembly. The Functional Specifications are advertised biennial for vendors to provide equipment to the State on a low bid basis. All underlined text indicates an addition or revision to these specifications from the previous version. The Functional Specifications are available on the Departments website.

The following sections of the **Notice to Bidders**, pages 1 - 8, shall apply to contract supplied traffic controllers: 12, 15, 16, 17, 18, & 19.

Item 1108117A – FULL ACTUATED CONTROLLER W/ACTUATED PEDESTRIAN PHASE (16 PHASE) shall conform to the requirements of Section 1, pages 9 – 55. The Controller Unit (CU) shall conform to the requirements of the PRE-EMPTION section, pages 15 – 17. All cabinets shall conform to the specifications of the “D” CABINET REQUIREMENTS, pages 41-46.

Controllers in a closed loop system shall conform to the requirements of Section 27, INTERNAL CLOSED LOOP SYSTEM FOR EXISTING NAZTEC SYSTEM, pages 97 – 105, in addition to the above requirements.

Traffic signal equipment which has not been previously approved to meet the requirements of the Functional Specifications for the above items, will not be approved for use on this contract.

Supplemental specifications listed below, have been added for material and controller operations which the Department of Transportation does not include in the Functional Specifications for Traffic Control Equipment.

24 Volt Relay	Type A
110 Volt Relay	Type F
	Type G
Time Delay Relay	
Non-Actuated Advance Green Phase	
Actuated Advance Green Phase	
Non-Actuated Clearance / Lag Green Phase	
Actuated Clearance / Lag Green Phase	
Flashing Stop Ahead Sign	

24 VOLT RELAY

All 24 Volt relays shall meet the requirements of one of the following two types. Diodes shall be installed across the coils of all direct current relays to shunt the reverse voltage generated when the coil de-energizes. All diodes shall be general purpose ECG 125 1000prv @ 25A or equivalent, rated at least .5 amp forward biased. Diodes shall be external to the relay, not enclosed in the dust cover.

TYPE A: Midland Ross, Midtex 155-92 or equivalent.

DESCRIPTION:

This relay shall be enclosed in a clear polycarbonate removable dust cover. It shall have a mechanical life of more than 100,000 operations at rated load.

CONTACTS:

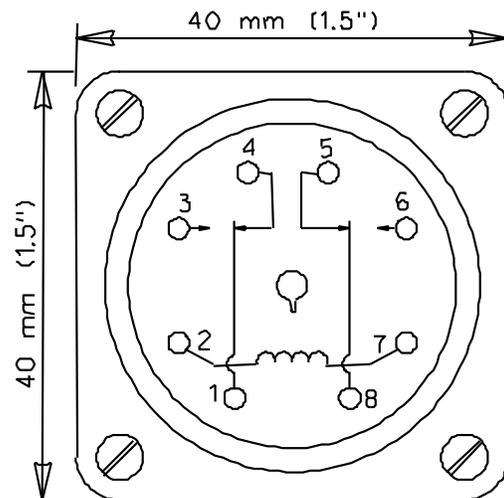
The contacts shall be 2 form C (D.P.D.T), U.L. rated at 5 amps 120 volts A.C. The contacts shall be pure fine silver (gold flash). There shall be no tungsten (lamp) load on the contacts of this relay.

COIL: The coil shall operate on 24 V.D.C. and have no less than 450 OHMS impedance.

SIZE: The relay shall be no larger than 65mm(2.5") H x 40mm(1.5") L x 40mm(1.5") W.

BASE: This relay shall have an eight pin octal plug-in base with the pin designation shown below:

1. Common (1)
2. Coil
3. Normally open (1)
4. Normally closed (1)
5. N.C. (2)
6. N.O. (2)
7. Coil (2)
8. Comm.



Bottom View And Wiring Diagram

SOCKET: The socket shall be a closed back, screw terminal type. The front mounted screws shall be 6-32 capable of accepting #14 AWG wire.

110 VOLT RELAY

All 110 volt relays shall meet the requirements of one of the following two types. Across the coil of each relay there shall be a molded suppressor rated at .1uf - 47 ohm @ 600V to suppress electrical noise created by the energization / de-energization of the relay.

TYPE F: Midland Ross, Midtex 136-62T3A1 or equivalent

DESCRIPTION:

Relays of this type shall function as flash transfer, power switching and signal drive. Other uses are acceptable, however, type G relays cannot be used for the above applications.

CONTACTS:

The contacts shall be in the D.P.D.T. form and consist of 10mm(3/8") diameter silver cadmium oxide, rated at 20 Amps @ 117 VAC resistive.

COIL:

The coil shall operate on 110 VAC. No semi-conductors will be allowed in the coil circuit of this relay.

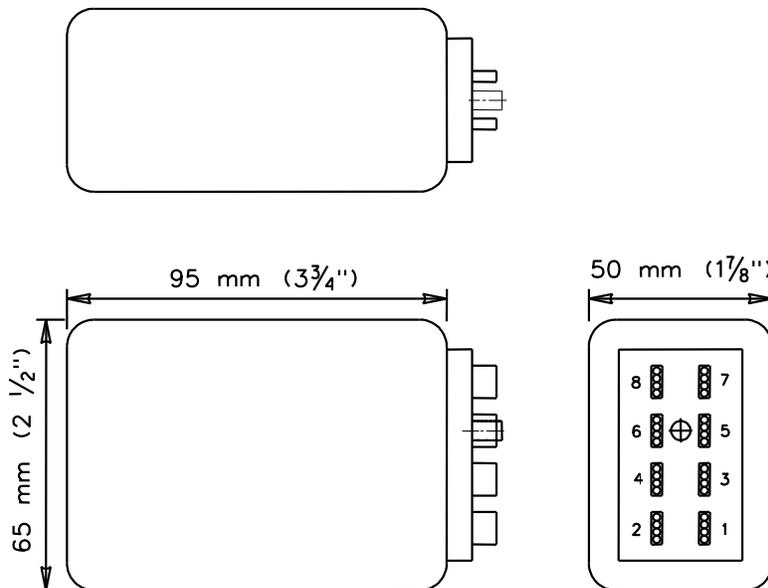
SIZE:

The relay shall be enclosed in a clear plastic dust cover. The overall dimensions shall be no larger than 63mm(2 1/2") x 94mm(3 3/4") x 47mm(1 7/8") as illustrated below.

BASE:

This relay shall have an eight blade plug-in base, Ventron Beau Plug P-5408 or equivalent with the pin designations as shown below:

- 1. Coil
- 2. Coil
- 3. N.C. 1
- 4. N.C. 2
- 5. Comm. 1
- 6. Comm. 2
- 7. N.O. 1
- 8. N.O. 2



SOCKET:

The socket shall be Ventron Beau Plug S-5408 or equivalent, contacts rated at 15 Amps @ 1750 VRMS. **TYPE G: Magnecraft, W 88 ACXP-8 or equivalent**

DESCRIPTION:

Relays of this type shall function in low current switching applications such as interconnect interface or pre-emption circuits. A clear polycarbonate plastic enclosure shall cover the relay mechanism.

CONTACTS:

The contacts shall be in the D.P.D.T. form and consist of 5mm (3/16") diameter gold flashed, silver alloy, rated at 10 Amps @ 120 VAC resistive.

COIL:

The coil shall operate on 120 Volts AC and require a nominal 3 VA.

SIZE:

Height, length and width dimensions shall be the same as the 24 volt relay Type A: 35mm (1 3/8") x 60mm (2 3/8") x 35mm (1 3/8").

BASE:

The base shall be an octal plug with the pin designations the same as the 24 volt relay Type A.

SOCKET:

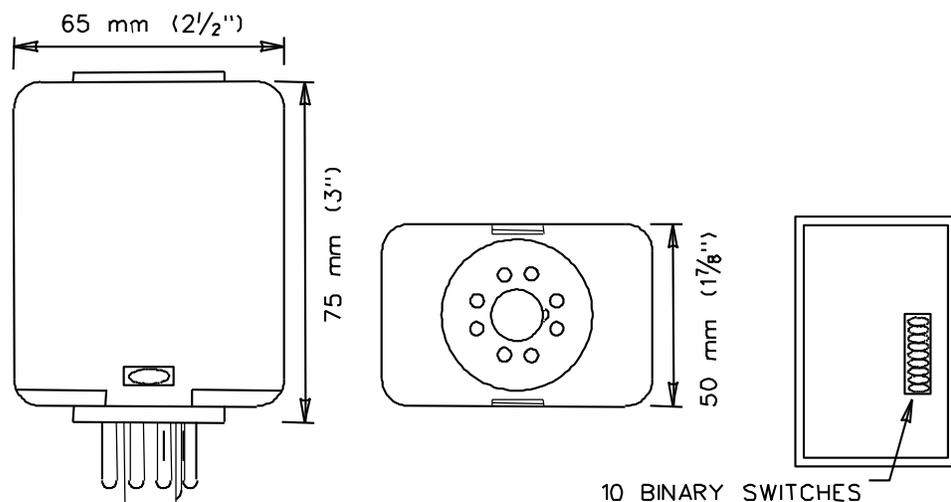
The socket shall be the same as that for the 24 volt relay Type A.

TIME DELAY RELAY

120 VAC SSAC TDM120A or equivalent
24 VDC SSAC TDM24DL or equivalent

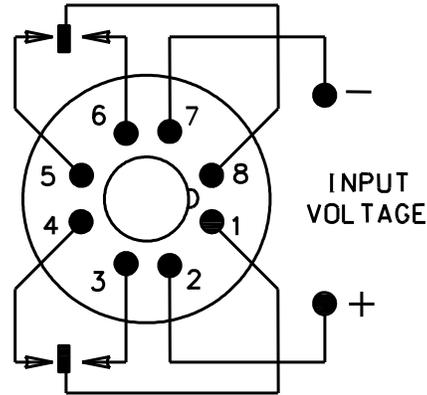
DESCRIPTION:

The time delay relays shall be self enclosed, plug-in, delay on operate type. They shall be digitally timed and adjustable by the use of dip switches located on the top of the case. The timing range shall be 1 to 1023 seconds in 1 second intervals. The time delay relays shall have an internal double pole double throw relay with form "C" contacts rated at 10 amps 120 volts AC. They shall operate accurately in a temperature range of -20 to +65 degrees C. A 120 volt AC input shall initiate timing of the 120 VAC TDR and a 24 VDC input shall initiate timing of the 24 VDC TDR. Removal of the input voltage shall reset the timer. Maximum dimensions of the case shall be as shown below.



SOCKET:

The socket shall be a standard octal base (8 pin) with screw terminal connectors. The pin designation shall be as shown below.



NON-ACTUATED ADVANCE GREEN PHASE

OCTAL (8 PIN) BASE

Where the timing and sequence indicates an advance green phase that always precedes the phase in recall (usually phase 2), and that either is fixed timed or is to be extended only, the following guidelines shall be in effect:

1. The parent phase ON output shall be diode connected to the advance phase OMIT input.
2. If the advance phase is to be extendable, it shall be in minimum recall. If the advance phase is fixed timed, it shall be in maximum recall. A different advance time may be selected by switching to maximum 2.

Example: Phase 1 is the advance phase (extendable), in minimum recall.
Phase 2 is the artery, in recall.
Phase 4 is the minor street, in non-lock.

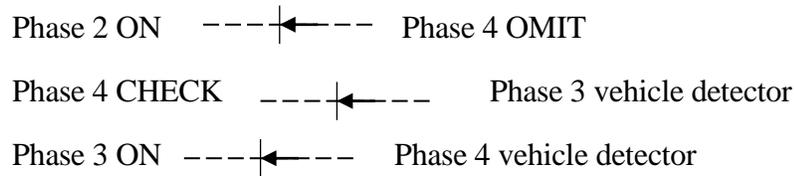


Where the timing and sequence indicates an advance phase that is fixed timed (not extendable), and that always precedes either a phase other than phase 2 or a phase not in recall, the following guidelines shall be in effect:

1. The recall phase (usually Phase 2) ON output shall be diode connected to the advance phase's, parent phase OMIT input.
2. The parent phase CHECK output shall be diode connected to the advance phase vehicle detector input.
3. The advance phase ON output shall be diode connected to the following parent phase vehicle detector input. This is to insure a green indication on the parent phase.

- The advance phase shall be in the non-lock mode. The advance time shall be selected from the maximum interval.

Example: Phase 2 is the artery, in recall.
Phase 3 is the advance for phase 4, in non-lock mode.
Phase 4 (parent phase) is the minor street, in non-lock mode.

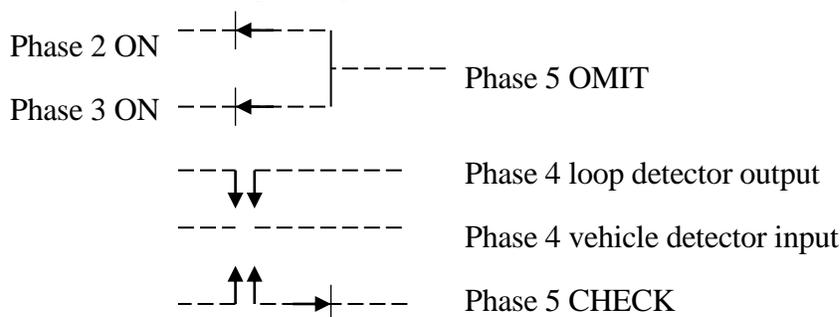


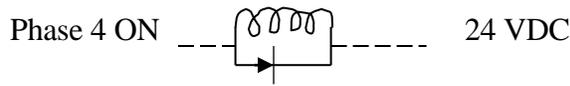
ACTUATED ADVANCE GREEN

Where the timing and sequence indicates an advance green phase that is to be extended only, and is to always precede either a phase other than phase 2 or a phase not in recall, the following guidelines shall be in effect:

- The phase ON outputs of all phases that could precede the advance phase, shall be diode connected to the parent phase OMIT input.
- The parent phase CHECK output shall be diode connected, through the normally closed contacts of a relay, to the advance phase vehicle detector input. The advance phase loop detector output shall be connected to the normally open contacts.
- The relay coil shall be energized by the advance phase ON output, which in turn will switch the vehicle detector input from the parent phase CHECK circuit to the loop detector.
- The advance phase ON output shall be diode connected to the following parent phase vehicle detector input. This is to insure a green indication from the parent phase.
- The advance phase shall be in the non-lock mode.

Example: Phase 2 is the artery, in recall.
Phase 3 is the pedestrian phase.
Phase 4 is the advance for phase 5, in non-lock.
Phase 5 (parent phase) is the minor street, in non-lock.





The 24 volt relay shall be Type C as previously described in these specifications.

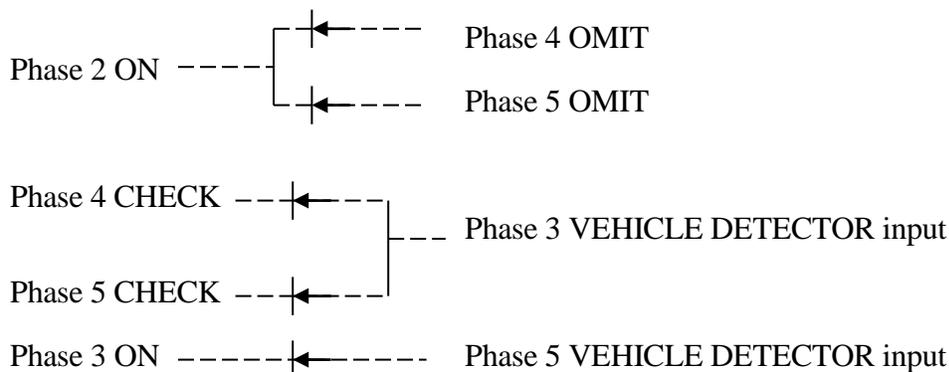
NON-ACTUATED CLEARANCE PHASE

NON-ACTUATED LAG GREEN PHASE

Where the timing and sequence indicates a non-actuated clearance phase or a lagging green phase that always follows the phase in recall, the following guidelines shall be in effect:

1. The parent phase ON output shall be diode connected to all appropriate phase OMIT inputs except the clearance phase.
2. The remaining actuated phases shall have their CHECK outputs diode connected to the clearance phase vehicle detector input.
3. The clearance phase ON output shall be diode connected to the following phases vehicle detector input (if the phase is in non-lock mode). This will prevent the controller from returning to the parent phase from the clearance phase without servicing the minor street.
4. The clearance phase shall be in the non-lock mode.
5. The clearance, or lag green time shall be selected from the maximum interval.

Example: Phase 2 is the artery, in recall.
Phase 3 is the clearance phase, in non-lock.
Phase 4 is the pedestrian phase.
Phase 5 is the minor street, in non-lock.



Where the timing and sequence shows a non-actuated clearance phase or lagging green phase following either a phase other than phase 2 or a phase not in recall, the following guidelines shall be in effect:

1. The parent phase ON output shall be diode connected to the following clearance phase vehicle detector input. This insures the clearance phase will always follow the parent phase.
2. The clearance phase shall be in the non-lock mode.
3. The clearance, or lag green time shall be selected from the minimum green interval.

Parent phase ON ---|--- Clearance phase VEHICLE DETECTOR input

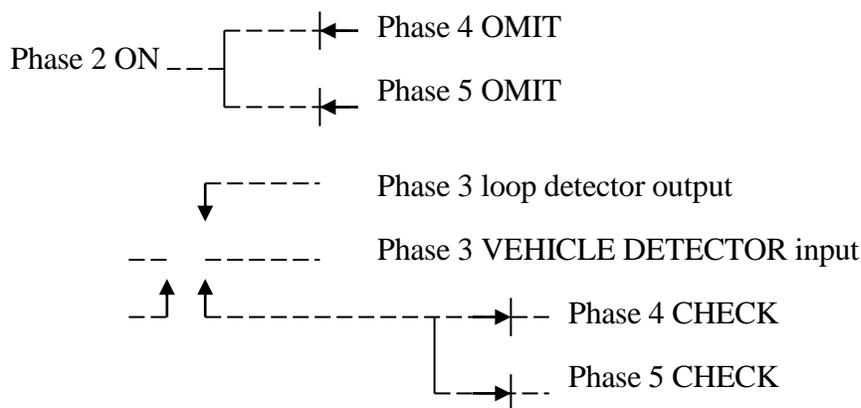
ACTUATED CLEARANCE PHASE

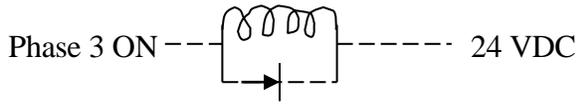
ACTUATED LAG GREEN PHASE

Where the timing and sequence indicates an actuated lagging green phase that is to be extended only, and always follows another phase, the following guidelines shall be in effect:

1. The parent phase (usually phase 2) ON output shall be diode connected to the phase OMIT inputs of all phases that could follow the lag phase.
2. The CHECK outputs of all phases that could follow the lag phase shall be diode connected, through the normally closed contacts of a relay, to the lag phase vehicle detector input. The lag phase loop detector output shall be connected to the normally open contacts.
3. The relay coil shall be energized by the lag phase ON output which in turn will switch the phase detector input from the CHECK circuits to the loop detector.
4. The lag phase shall be in the non-lock mode.

Example: Phase 2 (parent phase) is the artery, in recall.
Phase 3 is the lag phase, in non-lock.
Phase 4 is the pedestrian phase.
Phase 5 is the minor street, in non-lock.





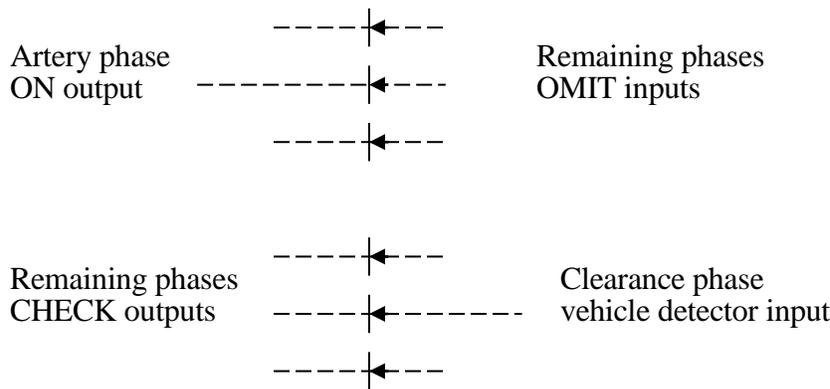
The 24 VDC relay shall be Type C as previously described in these specifications.

FLASHING STOP AHEAD SIGN

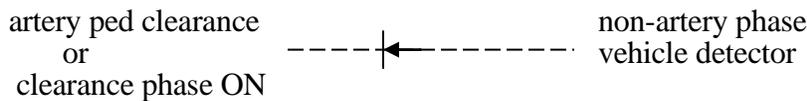
Where the timing and sequence indicates a flashing stop ahead sign, the clearance interval following the phase that the sign is off shall be timed by the following method.

The following phase shall be used for the clearance time. These phases shall be overlapped. The green indication will be maintained by the overlap feature and the following phase green time will be the stop ahead sign clearance.

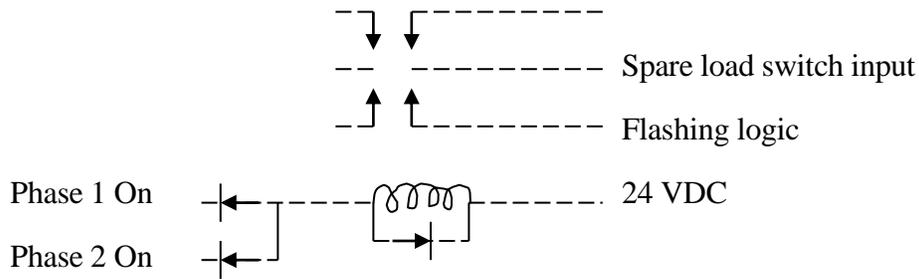
The artery phase ON output shall be diode connected to all other phase OMIT inputs except the clearance phase and the artery phase. The CHECK outputs from the remaining phases (as needed) shall be diode connected to the sign clearance phase vehicle detector input. The clearance phase shall be in the non-lock mode.



If the non-artery phases are in the non-lock mode, a call must be forced to the non-artery phase once the controller leaves the artery Hold interval (either artery walk or artery green). This prevents a false "Stop Ahead" indication if a vehicle turns right on red during the flashing sign clearance interval.



Unless otherwise shown on the plans, the 110 VAC flash power shall be from a spare load switch in the controller cabinet. The load switch input shall be driven with the flashing logic output from the controller. The flashing logic output shall be disconnected from the load switch during the intervals the sign is inactive.



Typical drive circuit for “WHEN FLASHING STOP AHEAD” sign

PEDESTRIAN SIGNAL WIRING AND PROGRAMMING

PED Pushbuttons shall be distributed evenly between the eight controller PED inputs and programmed appropriately.

If the pedestrian phase times would cause the coordination to go into transition, the maximum possible shortway correction per cycle shall be used.

ITEM NO. 1111201A – TEMPORARY DETECTION (SITE NO. 1)

Description:

Provide a Temporary Detection (TD) system at signalized intersections throughout the duration of construction, as noted on the contract plans or directed by the Engineer. TD is intended to provide an efficient traffic-responsive operation which will reduce unused time for motorists travelling through the intersection. A TD system shall consist of all material, such as pedestrian pushbutton, accessible pedestrian signal, conduit, handholes, cable, messenger, sawcut, loop amplifier, microwave detector, Video Image Detection System (VIDS), Self-Powered Vehicle Detector (SPVD), and any additional components needed to achieve an actuated traffic signal operation.

Materials:

Material used for TD is either owned by the Contractor and in good working condition, or existing material that will be removed upon completion of the contract. Approval by the Engineer is needed prior to using existing material that will be incorporated into the permanent installation. New material that will become part of the permanent installation is not included or paid for under TD.

Construction Methods:

The work for this item includes furnishing, installation, relocating, realigning, and maintaining the necessary detection systems as to provide vehicle and pedestrian detection during each phase of construction. If not shown on the plan, program the TD modes (pulse or presence) as the existing detectors or as directed by the Engineer. If the TD method is not specified elsewhere in the Contract, (loops, SPVD, microwave, VIDS, pushbutton, or other) it may be the Contractor's choice. The method chosen for TD must be indicated on the TD Plan submission.

The traffic signal plan-of-record, if not in the controller cabinet will be provided upon request. Ensure the controller phase mode (recall, lock, non-lock) and phase timing are correct for the TD. Adjust these settings as needed or as directed by the Engineer.

At least 30 days prior to implementation of each phase of construction submit a TD proposal to the Engineer for approval. Submit the TD proposal at the same time as the Temporary Signalization plan. Indicate the following information for each intersection approach:

- Phase Mode
- Temporary Detection Method
- Area of Detection
- Detector Mode

Submit the proposed temporary phase timing settings and the TD installation schedule with the TD proposal. See the example below.

Example Proposed Temporary Detection and Timing

Site 1

Warren, Rt. 45 at Rt. 341, Location #149-201

Approach	Phase	Phase Mode	TD Method	Area of Detection	Det Mode
<i>Rt. 45 NB</i>	<i>2</i>	<i>Min Recall</i>	<i>VIDS</i>	<i>150' from Stop Bar</i>	<i>Presence</i>
<i>Rt. 45 SB</i>	<i>2</i>	<i>Min Recall</i>	<i>SPVD</i>	<i>150' from Stop Bar</i>	<i>Pulse</i>
<i>Rt. 341</i>	<i>4</i>	<i>Lock</i>	<i>Microwave</i>	<i>30' from Stop Bar</i>	<i>Pulse</i>
<i>Rt. 341</i>	<i>4</i>	<i>Lock</i>	<i>Pushbutton</i>	<i>At SE & SW corners</i>	<i>n/a</i>

Temporary Phase Timing Settings:

Phase	Min	Ped	Ped Clr	Ext	Max 1	Max2	Yel	Red
<i>2</i>	<i>20</i>	<i>0</i>	<i>0</i>	<i>6</i>	<i>45</i>	<i>60</i>	<i>4</i>	<i>1</i>
<i>4</i>	<i>14</i>	<i>7</i>	<i>9</i>	<i>3</i>	<i>27</i>	<i>35</i>	<i>3</i>	<i>1</i>

Scheduled TD: *July 4, 2011*

Site 2

Scotland, Rt. 14 at Rt. 97, Location #123-201

Approach	Phase	Phase Mode	TD Method	Area of Detection	Det Mode
<i>Rt. 15 WB Left Turn</i>	<i>1</i>	<i>Non-Lock</i>	<i>VIDS</i>	<i>5' in front to 10' Behind Stop Bar</i>	<i>Presence</i>
<i>Rt. 14 EB</i>	<i>2</i>	<i>Min Recall</i>	<i>Existing Loop</i>	<i>150' from Stop Bar</i>	<i>Pulse</i>
<i>Ped Phase</i>	<i>3</i>	<i>Non-Lock</i>	<i>Pushbutton</i>	<i>At all corners</i>	<i>n/a</i>
<i>Rt. 14 WB</i>	<i>6</i>	<i>Min Recall</i>	<i>VIDS</i>	<i>150' from Stop Bar</i>	<i>Presence</i>
<i>Rt. 97</i>	<i>4</i>	<i>Lock</i>	<i>Loop, Pre- formed</i>	<i>20' from Stop Bar</i>	<i>Pulse</i>

Temporary Phase Timing Settings:

Phase	Min	Ped	Ped Clr	Ext	Max 1	Max2	Yel	Red
<i>1</i>	<i>5</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>12</i>	<i>18</i>	<i>3</i>	<i>1</i>
<i>2 & 6</i>	<i>24</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>26</i>	<i>36</i>	<i>4</i>	<i>1</i>
<i>3</i>	<i>16</i>	<i>7</i>	<i>9</i>	<i>0</i>	<i>16</i>	<i>16</i>	<i>4</i>	<i>1</i>
<i>4</i>	<i>14</i>	<i>7</i>	<i>9</i>	<i>3</i>	<i>27</i>	<i>35</i>	<i>3</i>	<i>1</i>

Scheduled TD: *July 4, 2011*

When, at any time during construction, the existing vehicle or pushbutton detection becomes damaged, removed, or disconnected, install TD to actuate the affected approaches. Install and make TD operational prior to removing existing detection. TD must be operational throughout all construction phases.

Provide a list of telephone numbers of personnel who will be responsible for the TD to the Engineer. If the TD malfunctions or is damaged, notify the Engineer and place the associated phase on max recall. Respond to TD malfunctions by having a qualified representative at the site within three (3) hours. Restore detection to the condition prior to the malfunction within twenty-four (24) hours.

If the Engineer determines that the nature of a malfunction requires immediate attention and the Contractor does not respond within three (3) hours following the initial contact, then an alternative maintenance service will be called to restore TD. Expenses incurred by the State for alternative service will be deducted from monies due to the Contractor with a minimum deduction of \$500.00 for each service call. The alternate maintenance service may be the traffic signal owner or another qualified Contractor.

TD shall be terminated when the detection is no longer required. This may be either when the temporary signal is taken out of service or when the permanent detectors are in place and fully operational.

Any material and equipment supplied by the Contractor specifically for TD shall remain the Contractor's property. Existing material not designated as scrap or salvage shall become the property of the Contractor. Return and deliver to the owner all existing equipment used as TD that is removed and designated as salvage.

Method of Measurement:

Temporary Signalization (TS) shall be measured for payment as follows:

Fifty percent (50%) will be paid when Temporary Detection is initially set up, approved, and becomes fully operational.

Fifty percent (50%) will be paid when Temporary Detection terminates and all temporary equipment is removed to the satisfaction of the Engineer.

Basis of Payment:

This work will be paid at the contract Lump Sum price for "Temporary Detection (Site No.)". The price includes furnishing, installing, relocating, realigning, maintaining, and removing, the necessary detection systems and all incidental material, labor, tools, and equipment. This price also includes any detector mode setting changes, timing or program modifications to the controller that are associated with TD. All Contractor supplied material that will remain the Contractor's property will be included in the contract Lump Sum price for "Temporary Detection (Site No.)". Any items installed for TD that will become part of the permanent installation will not be paid for under this item but are paid for under the bid item for that work.

<u>Pay Item</u>	<u>Pay Unit</u>
Temporary Detection (Site No.)	L. S.

ITEM #1112284A — VEHICLE DETECTION MONITOR

Description:

Furnish and install a Vehicle Detection Monitor with stand in the Controller Cabinet.

Materials:

All hardware shall be new, corrosion-resistant. All equipment shall be current production.

Physical:

- Compact and easily accessible stand-mounted LCD/ LED Flat Panel Display.
- Diagonal screen size minimum 10 inches and maximum 15 inches.
- Withstand temperatures ranging from -4 to 140°F (-20 to 60°C).
- Operating humidity: 10-90% non-condensing.

Functional:

- Compatible with Color or Monochrome Detection systems.
- Industrial-grade video panel.
- ANSI contrast ratio of 300:1 minimum.
- Minimum brightness level: 400 candelas per square meter (400 lux).
- Native resolutions: 1024 (horizontal) x 768 (vertical).
- Support both National Television Standards Committee (NTSC) and Phase Alternating Line (PAL) video formats with auto-sensing.
- Minimum viewing angle: 140 degrees horizontally, 120 degrees vertically.
- On-Screen Display (OSD) controls brightness, contrast, color as well as horizontal and vertical positioning.
- Compatible with video detection processor output. Use appropriate converters/ adapters if necessary.
- Operable on 110 VAC or 220 VAC, 50 or 60 Hz.
- FCC, Voluntary Control Council for Interference (VCCI), Electromagnetic Compatibility (EMC), Consumer Electronics (CE) approved, UL listed and Energy Star efficient.
- MTBF Rating: 50,000 hours minimum.

Warranties and Guarantees:

Provide warranties and guarantees to the **Department of Transportation Office of Maintenance** in accordance with Article 1.06.08 of the Standard Specifications. Warranties for all equipment furnished as part of this Contract are to cover a period of 24 months following successful completion of the entire intersection acceptance test.

Method of Measurement:

The Vehicle Detection Monitor will be measured for payment as the number of units furnished, installed, operational and accepted.

Basis of Payment:

This work will be paid at the Contract unit price for each accepted “Vehicle Detection Monitor,” which price shall include the Vehicle Detection Monitor, stand, documentation, warranty, labor, tools and equipment incidental thereto.

Pay Item	Pay Unit
Vehicle Detection Monitor	EA.

ITEM #1112285A – THERMAL VIDEO DETECTOR ASSEMBLY

Description:

Furnish and install a Thermal Video Detector Assembly (TVDA) as shown on the plans or as directed by the Engineer.

Materials:

All hardware shall be new, corrosion resistant. All equipment shall be current production.

Thermal Detector Assembly:

Thermal Imaging Sensor:

- Sensor Type: Focal Plane Array (FPA), Uncooled Vanadium Oxide Microbolometer
- Fixed mount pan and tilt unit bracket.
- Thermal Sensitivity: <75mk, <50 mK f/1.0 or lower.
- Active picture elements (pixels): 320(H) x 240(V), minimum. 25 micron pixel pitch.
- Thermal Output: Analog NTSC equivalent.
- Output impedance: 75 Ohms nominal.
- Operating Temperature Range: -50°C to 75°C (-58°F to 167°F)
- Lens Selection: Based on recommendation of manufacturer for each detector installed, per outcome of Site Survey.

Surge Protection

A thermal surge suppressor(s) shall be available for installation inside the traffic signal controller cabinet. The suppressor shall provide coaxial cable connection points to a Thomas Research CCTV-SP-NI or approved equal transient suppresser for each image sensor.

- Peak Surge Current (8 x 20 us) 20KA
- Technology Hybrid, Solid State
- Attenuation 0.1db @ 10Mhz
- Response Time <1 nanosecond
- Protection Line to Ground
- Shield to Ground (isolated shield modules)
- Clamp Voltage 6 volts
- Connectors BNC
- Impedance 75 Ohms
- Temperature -40 to +85 degrees C
- Humidity 0-95% non-condensing
- Dimensions 4.5" x 1.5" x 1.25"
- UL Listed UL 497B

Detector Enclosure:

- Tamper proof constructed of painted or powder coated aluminum of at least 0.06-inch (1.59-mm) thickness.
- Environmentally sealed housing. IP-66 Rating
- Adequate adjustable sunshield should be provided.
- Internal Heater, window defroster, and a thermostat to control both.
- The enclosure shall include grounding and surge protection.

Documentation: (TVDA)

Provide to the **Department of Transportation Office of Maintenance** three (3) copies of equipment manuals furnished by the manufacturer, which includes the following:

- Installation and operation procedures.
- Performance specifications (functions, electrical, mechanical and environmental) of the unit.
- Schematic diagrams.
- Pictorial of component layout on circuit board.
- List of replaceable parts including names of vendors for parts not identified by universal part numbers such as JEDEC/RETMA or EIA.
- Troubleshooting, diagnostic and maintenance procedures.

Site Survey:

Perform a site survey with the TVDA manufacturer representative at all TVDA locations prior to the installations of the TVDA equipment. The site surveys must be conducted in the field to accurately assess the existing conditions of each location. The purpose of the survey is to optimize the performance from the TVDA equipment when it is installed and ensure that it will meet the accuracy requirements specified previously. Submit the results of this survey to the Engineer in a report, which lists all TVDA locations with any recommended changes to camera locations, mounting adjustments, camera lens adjustments, and desired detection zone locations. This report shall be provided to the Engineer no later than the semi-final inspection.

Warranties and Guarantees: (TVDA)

Provide warranties and guarantees to the **Department of Transportation Office of Maintenance** in accordance with Article 1.06.08 of the Standard Specifications. Warranties for all equipment furnished as part of this Contract are to cover a period of 24 months following successful completion of the entire intersection acceptance test.

Construction Methods:

Install TVDA equipment in accordance with the manufacturer instructions and recommendations to achieve the detection zones as shown in the plans and accuracy as described in these specifications. Conduct the Site Survey as specified above. The location of the TVDA shown on the plan may be revised as a result of the Site Survey. Provide the Site

Survey report to the Engineer and review proposed TVDA relocations prior to installation of TVDA equipment.

Method of Measurement:

The Thermal Video Detector Assembly will be measured for payment as the number of detectors furnished, installed operational and accepted.

Basis of Payment:

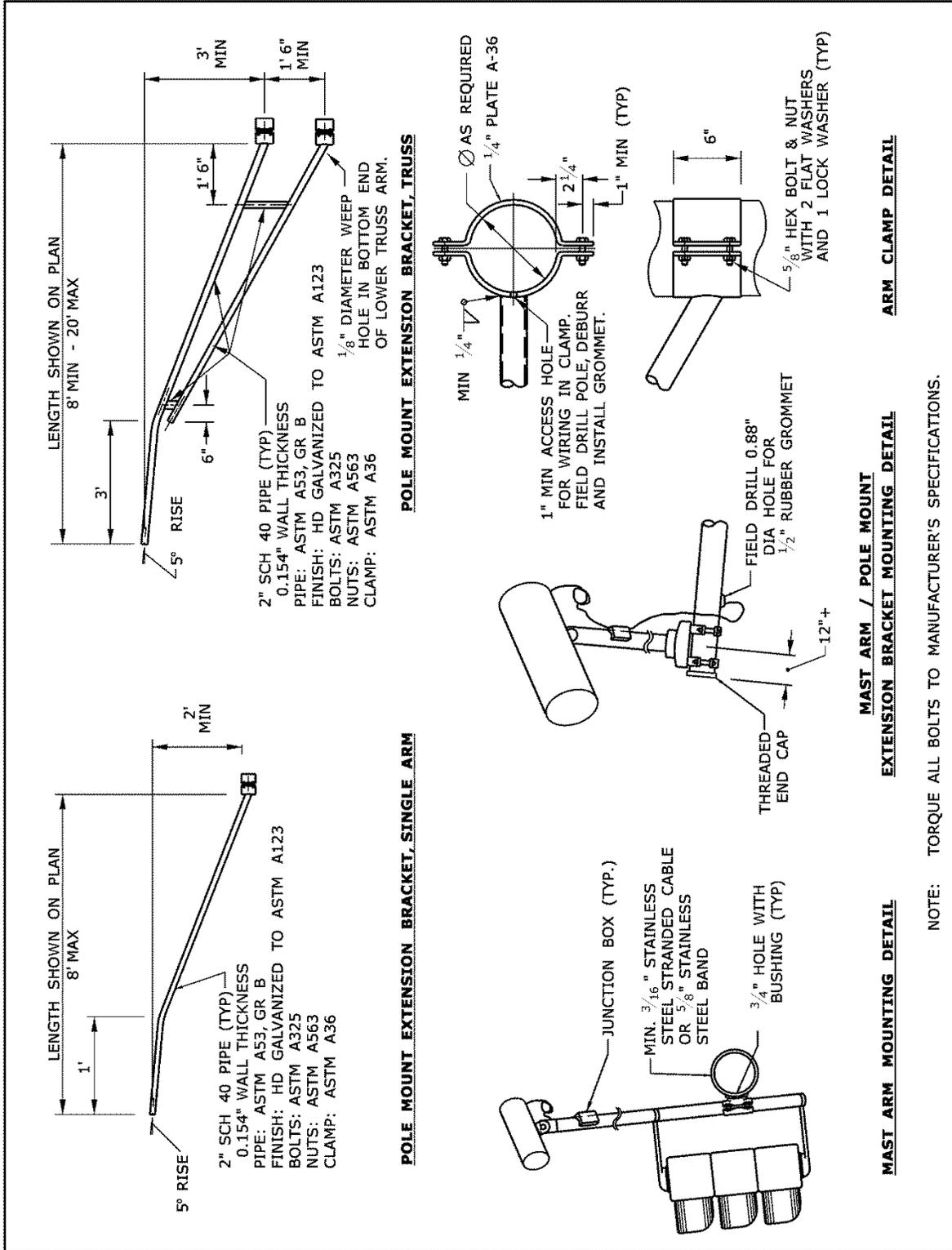
The unit bid price for Thermal Video Detector Assembly includes the detector, enclosure, surge protector, brackets used to attach the TVDA to a support structure or extension bracket, documentation, warranty, labor, tools and equipment necessary to provide the specified video signal to the VDP.

Pay Item

Thermal Video Detector Assembly

Pay Unit

Ea.



ITEM #1112286A – 360 DEGREE CAMERA ASSEMBLY

ITEM #1112287A – 360 DEGREE VIDEO DETECTION PROCESSOR

ITEM #1113725A – 23 AWG 4 TWISTED PAIR CATEGORY 6 CABLE

Description:

Furnish and install a 360 Degree Video Image Detection System (360VIDS) as shown on the plans or as directed by the Engineer. The 360VIDS consists of a 360 Degree Camera Assembly (360CA), 360 Degree Video Detection Processor (360VDP) and 23 AWG 4 Twisted Pair Category 6 Cable.

Materials:

All hardware shall be new, corrosion resistant. All equipment shall be current production.

360 Degree Camera Assembly:

Camera:

- No-aim, no-focus camera
- Downward facing lens and camera shroud
- Single Power Over Ethernet (POE) connection for power and data collection.
- Color image camera with 360 degree point of view (POV)
- Active picture elements (pixels): 2560 (H) x 1920 (V), minimum.
- Signal to noise ratio : ≥ 55 dB
- Heated camera
- IP addressable

Camera Enclosure:

- Tamper proof constructed of painted or powder coated aluminum of at least 0.25 inch thickness.
- IP66-rated camera housing.

Camera Mounting Hardware:

- Smartmount bracket.
- Junction box.
- Banded bracket.
- 90 degree vertical riser:
 - For mast arms, use vertical riser height specified on the plans
 - For span poles with horizontal extension brackets, use shortest vertical riser height physically possible
 - For span poles with no horizontal extension brackets (Shaft mounted), use vertical riser height specified on the plans

360 Degree Video Detection Processor:

Functional:

- Connectivity: Local Area Network (LAN), Wide Area Network (WAN), Camera interfaces.
- NEMA TS1/ TS2, ATC, Type 170, and 2070 compatible
- Four (4) USB 3.0 expansion ports.
- Front panel LED indicators displays calls and light states.
- I/O controller.
- Two (2) camera ports – Up to two (2) 360 Degree Camera Assembly; or one (1) 360 Degree Camera Assembly and four (4) IP video detection camera assembly or thermal detector assembly; or eight (8) IP video detection camera assembly or thermal detector assembly.
- Phase and detection display.
- Shall include at least a built-in 4g modem (or higher) and be Wi-Fi capable
- Power – 110/220 VAC 50/60 Hz
- Point and click zone drawing feature
- Omni-directional vehicle tracking
- Zone level visibility monitoring
- Monitor phases and loops, generates calls to controllers
- Software required to support collection of data
- Environmental : -29F to +165F (-34C to +74C), 0-95% non-condensing
- Fail-safe in the event of loss of video from 360CA or loss of power to 360VDP.
- Shall be able to configure and adjust the detection zone with the cabinet mounted Vehicle Detection Monitor (VDM) or remotely.
- Shall be activated to collect and report traffic data such as turning movements/volume counts, vehicle classification, speed, and red/green occupancy.
- Shall be configured to transmit collected traffic data and alarm events from field devices to remote desktop PC.
- Shall be configured to sync with a cloud network resource to allow for data backup including signal performance metrics data such as the Purdue coordination diagram.

Application Software:

- Shall be freely available for installation on any number of computers used to manage the 360VIDS.
- Shall be capable of point and click zone drawing
- Shall support the assignment of a detector output(s) to each zone. These assignments can be modified at any time through the software.
- Shall have the ability to digitally flatten CA image
- Shall have the ability to mask objects that occlude the camera field of view and/or disrupt the camera automatic gain and exposure control.

- Shall store detection zone data non-volatile memory so that after recovery from power interruption, all parameters are returned to latest settings.
- Shall have the ability to import and export program database to notebook PC or remote desktop PC. The program database shall also be allowed to be transferred via an external storage device.
- Shall be capable of superimposing detection zone on real time video image from selected camera with time stamping capabilities.
- Shall be capable of monitoring real time video and adjusting zones in field or remotely while 360VDP is actuating the traffic controller.
- Shall provide visual confirmation of detection by highlighting detection zone symbols.
- Shall allow for remote display of site/camera status for all connected sites.
- Shall provide visual indication of the light state for each zone within the graphical user interface.
- Shall be capable of searching the network for other 360VDP.
- Shall be compatible with Windows operating system supported by the Department.
- Shall maintain a historical log of all configurations when site is modified
- Shall feature the ability to digitally pan, tilt, and zoom within the camera assembly's field of view without movement of the camera.
- Shall support quad view video monitoring.
- Shall be capable of syncing with a cloud network resource to allow for group site sharing of site program database information and historical traffic data report generation.
- Shall maintain a database of current and historical traffic data
- Shall allow users to create reports for turning movements/volume counts, vehicle classification, speed, red/green occupancy, and site alerts remotely via the software and online reports/performance measures via the web.
- Shall display data in a graph, chart, and table format.
- Shall display data in 15, 30, and 60-minute intervals.
- Shall provide a means by which alerts can be configured to be delivered to different individuals via email
- Report output formats shall include at minimum PDF, rich text format, and Microsoft Excel formats.

Physical:

- Either shelf mounted, stand-alone design or modular card rack design.
- Aluminum card rack frame capable of accepting four (4) 360VDP modules.
- TS1 harness cable.
- Standard Ethernet and USB connectors for video input and video output.
- Female metal shell connector with latching clamp for NEMA TS 1 detector outputs and inputs.
- LED indications to monitor all detector outputs.
- Side or rear mounted connectors and controls are not allowed on stand-alone units.

- NEMA FR-4 glass epoxy or equivalent circuit boards.

Antenna:

- Shall be mounted externally on top of traffic cabinet
- Shall be “Multiple-Input and Multiple-Output” (MIMO)
- Shall cover the Cellular, WIFI, DSRC, GPS, and Bluetooth networks
- Shall connect to the 360VDP

Ethernet Repeater:

- Utilize Ethernet repeater if CAT6 cable distance is over 300’.

Ethernet Switch:

- Power Over Ethernet (POE) switch
- Ports for up-to four (4) traditional or thermal cameras.
- Powder coated aluminum.
- Dual purpose LED port lights.
- RJ-45 CAT6 connectivity.
- Environmental: -29F to +165F (-34C to +74C).
- NEMA TS2 compliant.

Video Encoder:

- Power Over Ethernet (POE)
- Video: H.264 (MPEG-4 Part 10/AVC) Baseline and Main Profile
- Compression: Motion JPEG
- Resolutions: 176x120 to 720x576, 176x120 to 1536x1152 for quad view.
- Frame rate:
 - H.264: 25/30 (50/60 Hz) fps,
 - 15fps in quad view in full resolution,
 - Motion JPEG: 25/30 (50/60 Hz) fps,
 - 15fps in quad view in full resolution.
- Video Streaming: Multi-stream H.264 and Motion JPEG: One H.264 and one JPEG stream on each channel (8 streams in total) in full frame rate individually configured streams in max. resolution at 25/30 fps; more streams if identical or limited in frame rate/ resolution. Controllable frame rate and bandwidth; VBR/CBR H.264.
- Environmental: -40F to +167F (-40C to +75C), 10-95% non-condensing.
- NEMA TS2 compliant.

Ethernet Protection Module:

- Either shelf mounted or stand-alone design.
- Protect 360CA, IP video detection camera assembly, thermal cameras and 360VDP in the event of a surge or lightning.

Environmental:

- Comply with NEMA TS 2, Section 2 requirements for Controller Assembly.
- Pass following NEMA TS 2 tests and applicable test procedures.

- Vibration: Section 3.13.3, Section 3.13.8.
- Shock: Section 3.13.4, Section 3.13.9.
- Transients, Temperature, Voltage and Humidity: Section 3.13.7.
- Power Interruption: Section 3.13.10.

Peripherals:

- Separable Keypad & Joystick or Computer Mouse including all necessary cables for connectivity to 360VDP.

23 AWG 4 Twisted Pair Category 6 Cable:

- Supply the 360CA power and return the video signal to the 360VDP.
- Outdoor Aerial CAT6 cable with UV insulation.
- Rated for 48VDC
- 250MHZ, shielded, gel-filled (flooded core) direct burial grade.
- Shall be equipped with a drain wire.
- Terminate with compatible connector.
- Polyethylene insulation.
- Shall be installed continuous between the 360CA and 360VDP.
- Cable shall be installed according to TIA/EIA-568-B.
- Other type cable may be substituted at the request of the 360VDP manufacturer with the Department's approval.

Documentation: (360VDP and 360CA)

Provide to the **Department of Transportation Office of Maintenance** three (3) copies of equipment manuals furnished by the manufacturer, which includes the following:

- Installation and operation procedures.
- Performance specifications (functions, electrical, mechanical and environmental) of the unit.
- Schematic diagrams (point to point wiring).
- Pictorial of component layout on circuit board.
- List of replaceable parts including names of vendors for parts not identified by universal part numbers such as JEDEC/RETMA or EIA.
- Troubleshooting, diagnostic and maintenance procedures.
- Testing results of grounding, voltage, and cable length measurements as indicated on the installation best practice verification at the end of this document.

Site Survey:

Perform a site survey with the 360VDP manufacturer representative at all 360VIDS locations prior to installation. The site surveys must be conducted in the field to accurately assess the existing conditions at each location. The purpose of the survey is to optimize the performance from the 360VIDS equipment when it is installed. Prior to installation, submit the results of this survey to the Engineer in a report, which lists all 360VIDS locations with any

recommended changes to camera locations, mounting adjustments, camera lens adjustments, and desired detection zone locations.

Warranties and Guarantees: (360VDP and 360CA)

Provide warranties and guarantees to the **Department of Transportation Office of Maintenance** in accordance with Article 1.06.08 of the Standard Specifications. Warranties for all equipment furnished as part of this Contract are to cover a period of 36 months following successful completion of the entire intersection acceptance test.

Construction Methods:

Install 360VIDS equipment in accordance with the manufacturer instructions. Detection zones shall be replicated as shown in the plans. The Contractor shall install vehicle-counting zones for each lanes as shown in the plans. The Contractor shall ensure the vehicle counting zones be as accurate as possible. The Contractor shall contact the Engineer to confirm detection zone and vehicle counting zone locations. The Contractor shall refer to the “Installation Best Practices Guide” attached below to this specification and the Intersection Design Guide located on the Manufacturer’s website Note that all references to “Cat5e cable” in the attached “Installation Best Practices Guide” shall refer to “23 AWG 4 Twisted Pair Category 6 Cable” as specified above in this specification. In addition, any references to the SMARTMOUNT 7’ extension on the “System overview and Installation Guidance” shall follow the Camera Mounting Hardware section of this specification. The location of the 360CA shown on the plan may be revised as a result of the Site Survey. Peripherals are to be furnished and fully installed in an easily accessible position within the controller cabinet. Leave proper clearance(s) surrounding video monitor to allow for accessible connections and space to utilize surrounding equipment.

The Contractor shall forward the configuration file in electronic format to the Traffic Signal Lab’s Mr. Mark Zampini at Mark.Zampini@ct.gov, immediately upon completion of configuration of the detection zones. The Contractor shall address any comments/corrections identified by the Traffic Signal Lab.

Method of Measurement:

The 360 degree Camera Assembly will be measured for payment as the number of 360 degree cameras furnished, installed operational and accepted.

The 360 degree Video Detection Processor will be measured for payment as the number of units including all additional work and materials listed in Basis of Payment, furnished, installed, operational and accepted.

23 AWG 4 Twisted Pair Category 6 Cable will be measured for payment as linear feet, furnished, installed and accepted.

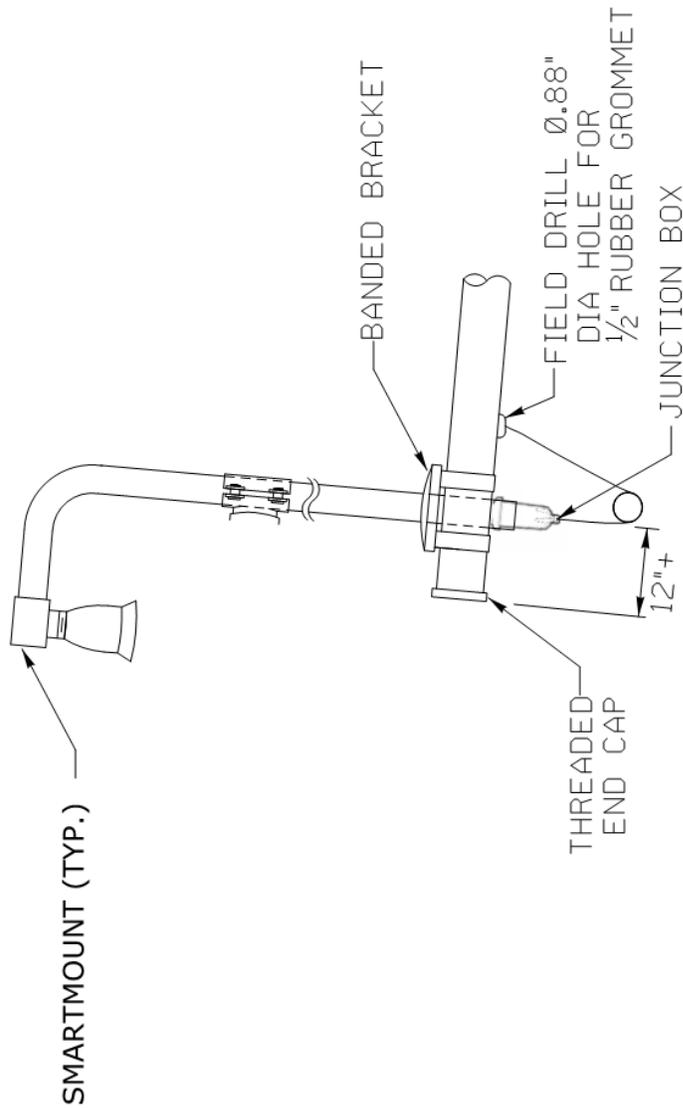
Basis of Payment:

The unit bid price for 360 degree Camera Assembly includes the 360 degree camera, enclosure, vertical riser and hardware used to attach the 360CA to a support structure, documentation, warrantee, labor, tools and equipment necessary to provide the specified video signal to the 360VDP.

The unit bid price for 360 degree Video Detection Processor includes the manufacturers' site survey, unlimited number of any necessary 360VIDS configuration software and license, card rack frame, power supply, all miscellaneous hardware such as PC interface cable with connectors, necessary peripherals such as Ethernet repeater, Ethernet switch, video encoder, Ethernet protection module, documentation, warrantee, labor, tools and equipment necessary to make the 360VIDS fully operational.

The unit bid price per linear foot for 23 AWG 4 Twisted Pair Category 6 Cable includes all connectors, labor, tools and equipment necessary to install the cable between the 360CA and the 360VDP.

<u>Pay Item</u>	<u>Pay Unit</u>
360 Degree Camera Assembly	Ea.
360 Degree Video Detection Processor	Ea.
23 AWG 4 Twisted Pair Category 6 Cable	LF



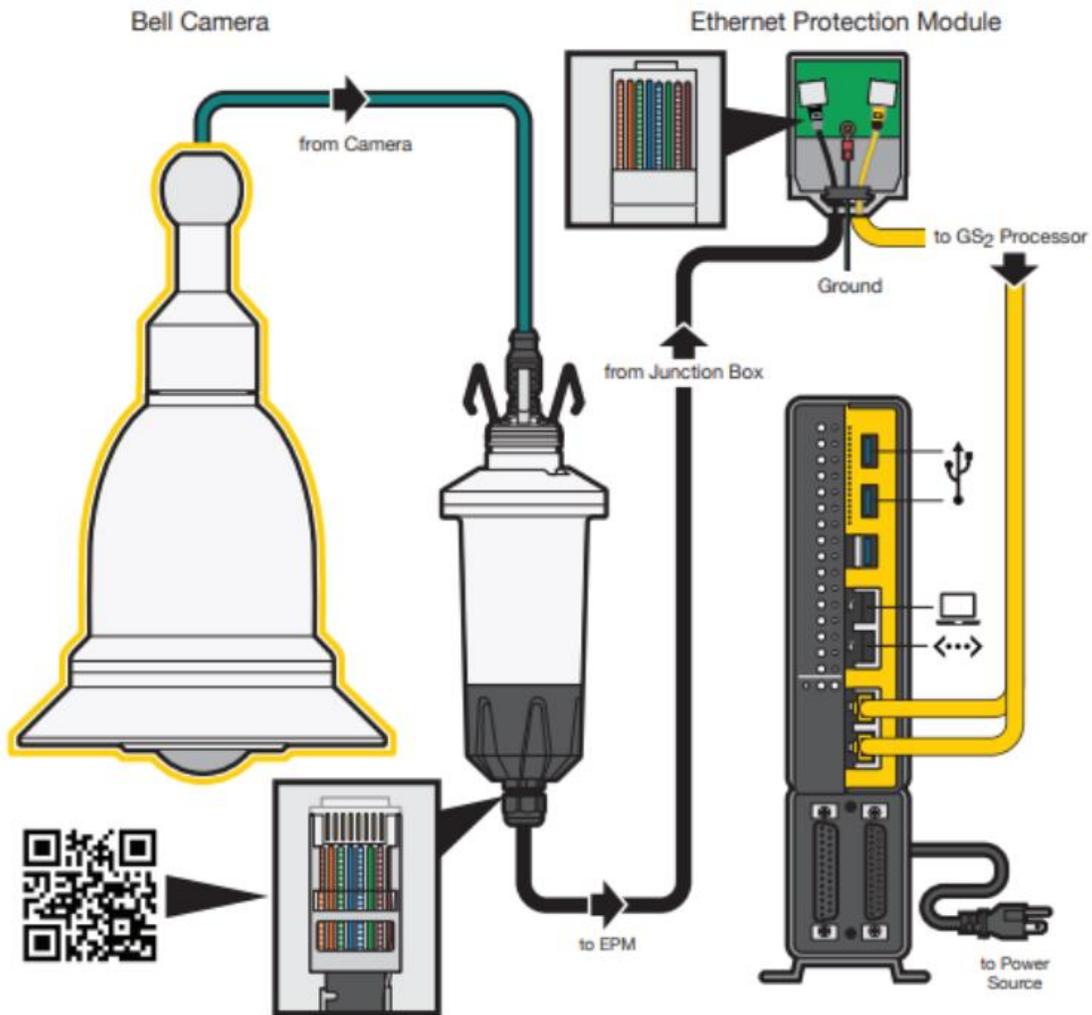
MAST ARM / POLE MOUNT
EXTENSION BRACKET MOUNTING DETAIL

NOTE: TORQUE ALL BOLTS TO MANUFACTURER'S SPECIFICATIONS.

MODEL - \$MODELNAME\$

FILENAME - \$FILEL\$

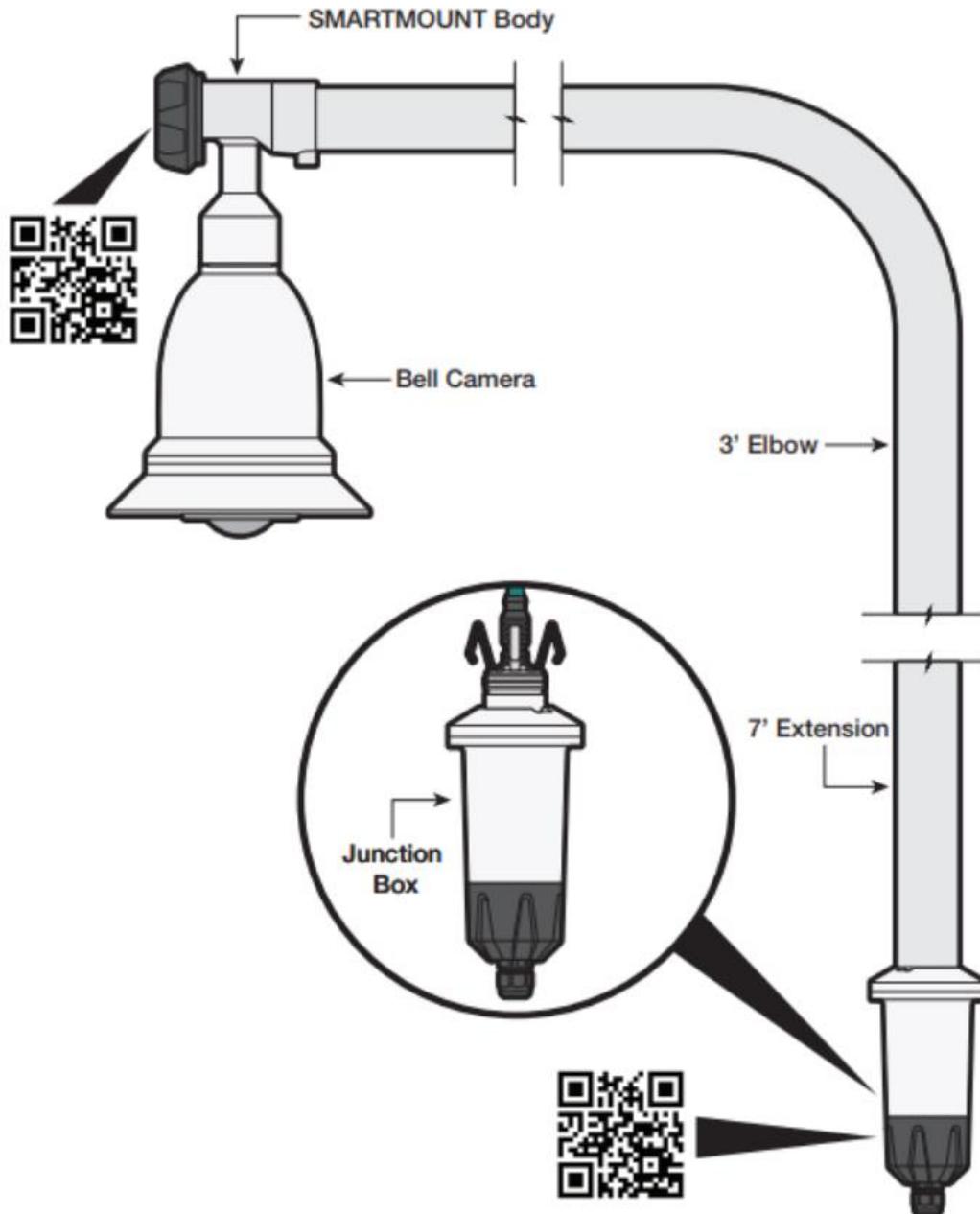
SYSTEM CONNECTIONS



Pro Tips (Before Beginning Installation):

- Test Bell Camera (while still in foam packaging).
- Make sure unit is grounded correctly.
- Make sure Bell Camera is level and in front of stop bar.
- Check TS1 Wiring Harness Insert – TS1 connection.
- Check "Tool List" in installation guide.

SYSTEM OVERVIEW



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marketing@gridsmart.com | 1.866.652.5347 | GRIDSMART.com

GRIDSMART.

INSTALLATION GUIDE

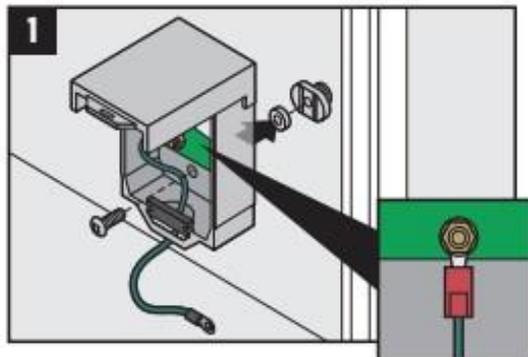
TOOLS AND ITEMS NEEDED

- 7/16" Wrench
- 1/2" Wrench
- 3/4" Wrench
- 1/4" Wrench
- 3/32" Wrench
- 17 mm Wrench
- Utility knife
- Phillips screwdriver
- Flat-head screwdriver
- 1/2" Drill bit
- 5/32" Allen wrench (included)
- Mounting bracket
- CAT5e test cable
- 24AWG Shielded CAT5e cable
- RJ-45 Crimper
- Laptop (with GRIDSMART Client installed)
- EXO Crimp frame
- Ground wire clamp (included)
- USB flash drive
- Cable tester
- Hand level
- DLG Di-120b Tester

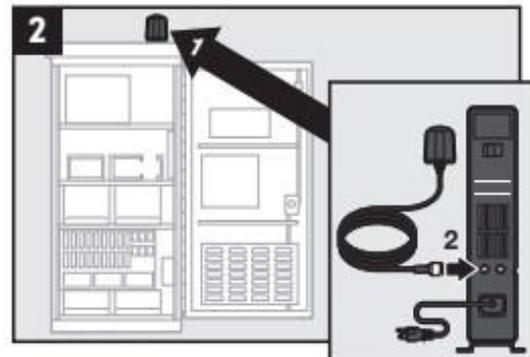


BEFORE INSTALLATION

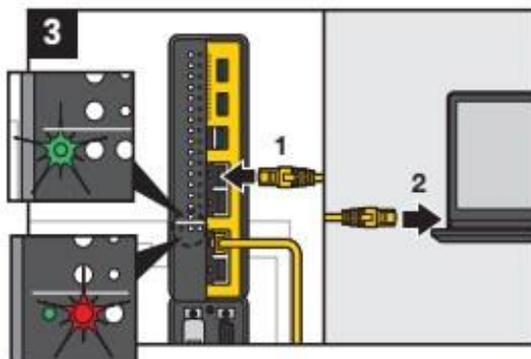
Helpful tip: On your laptop, verify that the GRIDSMART Client is updated to the latest software version. Download the latest update from GRIDSMARTCloud.com.



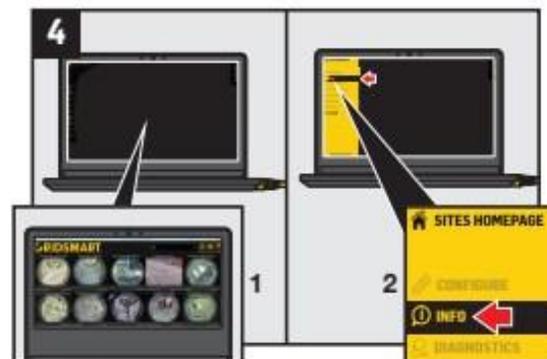
Install EPM onto cabinet DIN rail on opposite side from power distribution. Cut along rubber grommet "X". Connect 10AWG ground wire as close to ground rod as possible using ground wire clamp.



Mount Antenna to top of cabinet using 1/2" drill bit. Connect CELL Antenna lead to female connector on back of Processor.



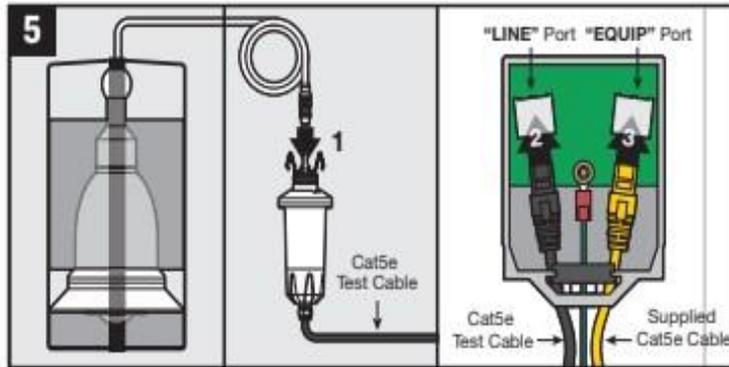
Connect Processor to power source and power on (status light turns green in 2-3 minutes). **DO NOT USE A GFCI TYPE OUTLET.** Connect laptop to "LAPTOP" port on Processor with a CAT5e cable.



Launch GRIDSMART Client on laptop. Select factory default site card. Select "Info", verify "Site Info" version.

NOTE: The Bell Camera has not yet been connected, so there will be no Camera image.

BEFORE INSTALLATION (continued)

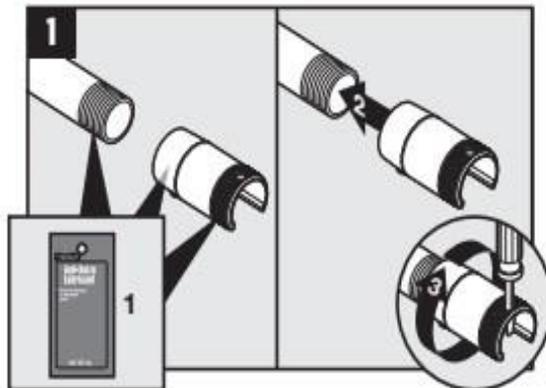


With Bell Camera in foam packaging, connect Camera cable to Junction Box upper connection. Connect one end of CAT5e test cable to Junction Box lower connection and remaining end to the EPM Module "LINE" port. Connect one end of supplied CAT5e cable to EPM Module "EQUIP" port and remaining end to Processor. Verify Bell Camera image. Camera status light turns green in 2-3 minutes.

After successful equipment test, disconnect cables to Junction Box, EPM, Processor and laptop. Leave cable connected to Bell Camera.

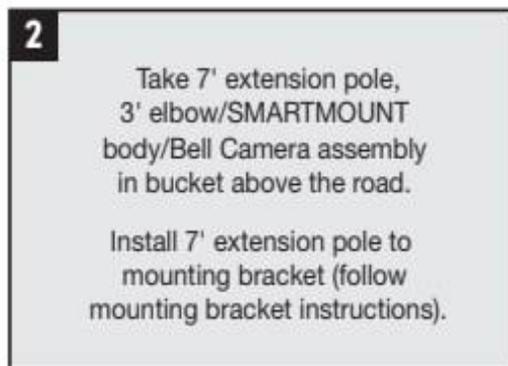
INSTALLATION

Helpful tip: Before proceeding, route 24 AWG gel-filled, shielded, burial grade CAT5e cable from traffic cabinet to the Bell Camera mounting location.



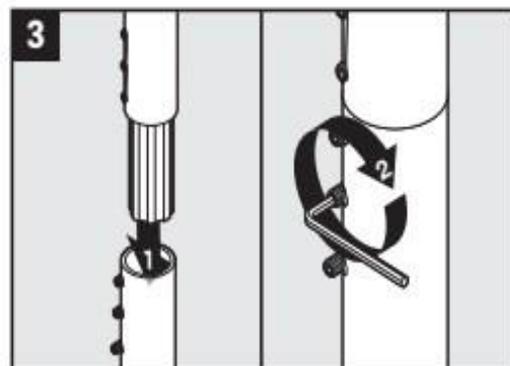
Apply anti-seize to 3' elbow and internal and external threads of SMARTMOUNT body. Install SMARTMOUNT body to upper end of 3' elbow turning clockwise to secure.

NOTE: SMARTMOUNT body opening must be facing down in final position. Tighten center set screw.



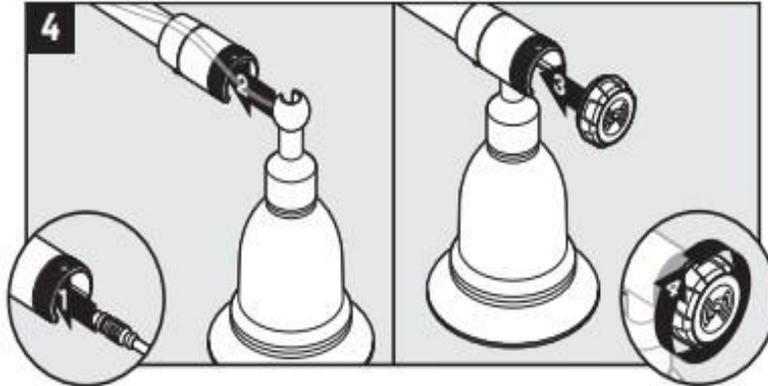
Take 7' extension pole, 3' elbow/SMARTMOUNT body/Bell Camera assembly in bucket above the road.

Install 7' extension pole to mounting bracket (follow mounting bracket instructions).



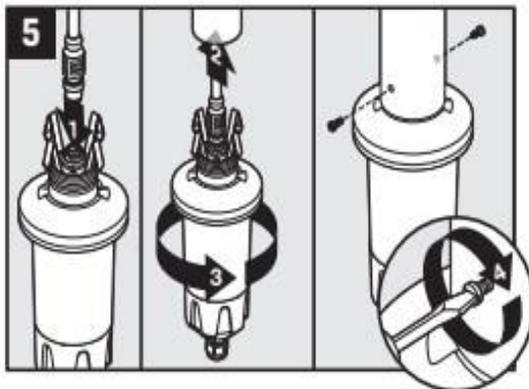
Insert 3' elbow connector into 7' extension using pole connector. Tighten screws with Allen wrench to secure.

INSTALLATION (continued)

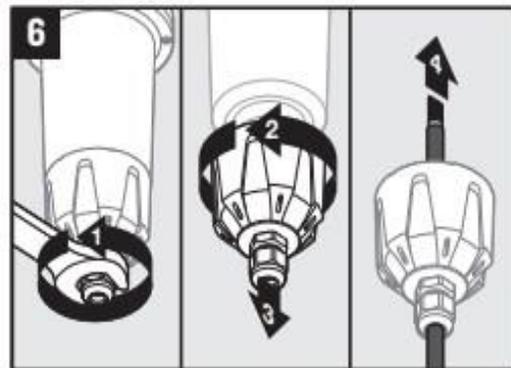


Feed Bell Camera cable through SMARTMOUNT body, 3' elbow and 7' pole extension. Slide Bell Camera ball joint into SMARTMOUNT body, being sure the ball joint opening is well aligned with body/pole opening so as not to damage cable.

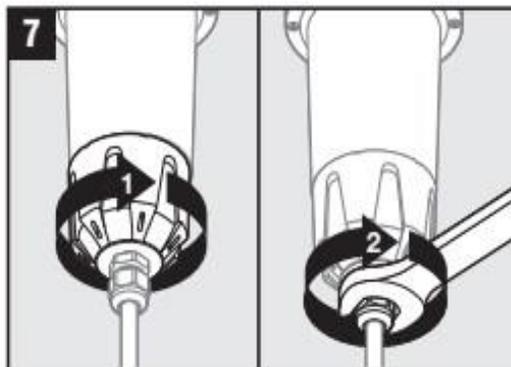
Secure Bell Camera to SMARTMOUNT body with cap. Turn cap clockwise to tighten.



Connect Bell Camera cable from 7' extension to junction box upper connection. Insert Junction Box (turning counter clockwise up to three times to prevent kinking or binding of cable) into 7' extension pole. Install Junction Box set screws to 7' extension pole to secure Junction Box. Tighten with flathead or hexhead screwdriver.

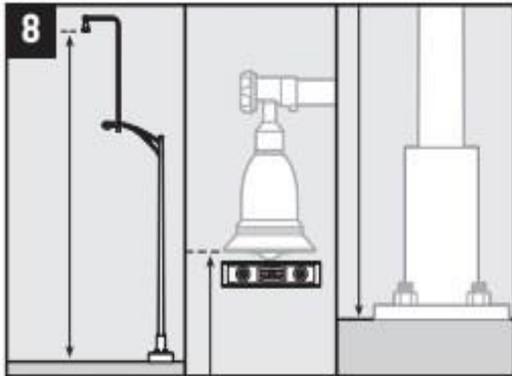


Using a 3/4" wrench, loosen cord grip from cap on bottom of Junction Box. Loosen cap and remove from Junction Box. Push unterminated field cable through cord grip and cap. **Do not tighten cord grip until step 7.** Terminate cable with RJ45, using standard 568B configuration color wiring.



Connect the RJ45 to receptacle and replace cap onto Junction Box (hand-tighten) until fully closed. Tighten cord grip using a 3/4" wrench, to 30 in-lbs max torque.

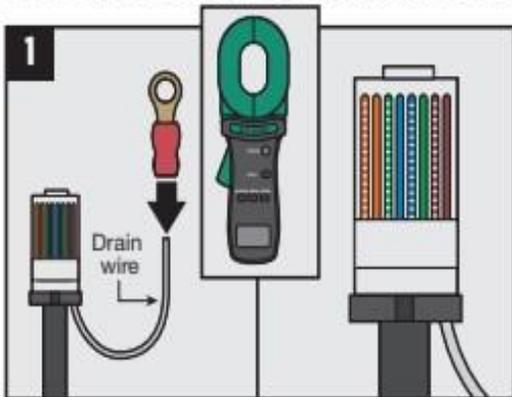
INSTALLATION (continued)



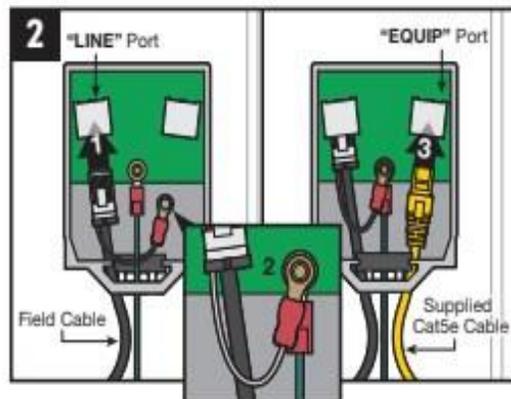
VERY IMPORTANT

Using a tape measure, measure height of Bell Camera. Record the height for use later to set up system. Orient the "G" logo away from area of consequence, level the Bell Camera and tighten the center set screw.

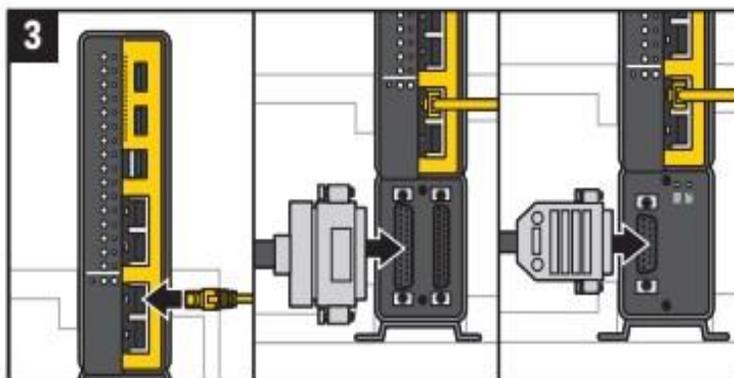
GROUNDING AND FINAL INSTALLATION



Crimp an RJ45 onto remaining end of field cable and verify with cable tester. Crimp the ring terminal to the CAT5e cable drain wire. Verify good crimp on drain wire ring terminal.



Connect field cable to EPM "LINE" port. Connect drain wire ring terminal to the EPM ground to eliminate signal noise and EMI. Connect supplied CAT5e cable EPM "EQUIP" port.



Connect supplied CAT5e to Processor "CAMERA" port. Reconnect the laptop to the "LAPTOP" port. Connect TS1, TS2 or ITS wiring harness to Processor.

GRIDSMART. QUALITY BEST PRACTICES

1 CABINET GROUNDING

A proper cabinet ground helps mitigate interference from electrical noise at the intersection.

- The U.S. National Electrical Code (NEC) recommends a maximum of 25 ohms for touch safety and telecommunications; PLC industry standards require a maximum of 5.0 ohms for logic reference purposes.
- Use a clamp-on ground meter to verify the cabinet ground.
- GRIDSMART requires the Diligent Instruments DLG Di-120b Tester (<http://www.diligentinstruments.com/di-120.html>).
- If the ground reading is higher than the recommended NEC value, check the connection between the cabinet ground wire and the ground rod for corrosion; clean if corrosion is present. If you are in an area with poor grounds, you may need to add a ground rod to the grounding system to improve the ground.

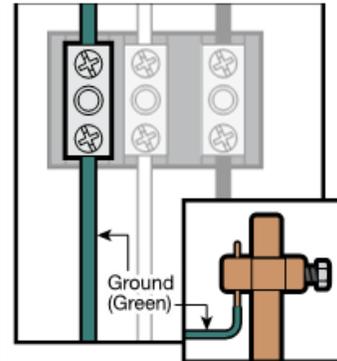
SPECIFICATION:	25 Ohms Max
MEASURED:	

2 AC POWER

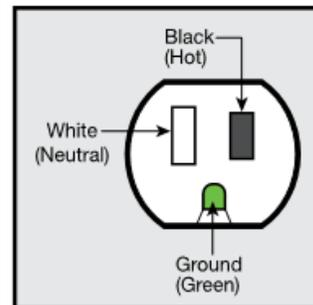
Plug the GRIDSMART Processor into an outlet on the filtered side of the cabinet power. Do not use GFCI type outlet.

- The outlet needs to be checked to verify that all three connections for the outlet are properly connected.
- Using a digital voltmeter (DVM), check the ac voltage from the line to the neutral and the line to ground. Both readings should be ~ 120/240VAC.

SPECIFICATION:	HOT/NEU: 120/240VAC HOT/GND: 120/240VAC
MEASURED:	HOT/NEU: HOT/GND:



DLG Di-120b Tester

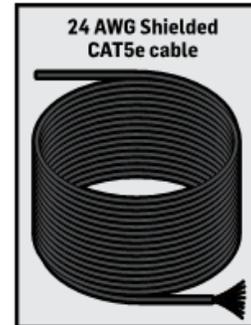


3 CABLE TYPE & LENGTH

All GRIDSMART installations require burial grade, shielded, gel filled, CAT5e cable with solid core 24 AWG conductors. The shield will protect the data signals from radiated noise which is present in most intersections. LED streetlights have been found to be very noisy electrically and as more streetlights are switched to LED lights, the level of radiated noise will increase. The cable that GRIDSMART supplies and requires for all installations is Vertical Cable part #059-487/S/CMXF.

- The maximum length that a segment of CAT5e can be is 300 feet. If the distance from the EPM to the camera is more than 300 feet, a repeater (RBA) must be used.
- When determining length of the cable, a cable tester that measures the length of the cable is required. Do not rely on sight distance or "walking off" the distance.
- Many times, there are service loops in the pull boxes and at the base of the pole, which will not be accounted for when you do not use a meter for measuring the cable length. GRIDSMART recommends the Triplet Real World Certifier (www.triplett.com/shop/real-world-certifier-rtc1000k/) for testing the cable. The tester will provide length measurements as well as cable quality measurements.

SPECIFICATION:	Cable Length: 300 Ft Max Real World Certification: 100 MB Min Cable Type: Vertical Cable part #059-487/S/CMXF
MEASURED:	Cable Length: Real World Certification: Cable Type:



Triplet Real World Certifier



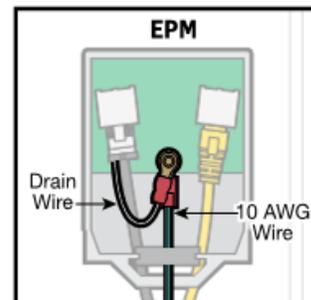
4 CONNECT DRAIN WIRE

The drain wire for the shielded CAT5e cable must be connected to the ground post in the EPM (Ethernet Protection Module). A crimp lug should be attached to the end of drain wire to attach it to the ground post. The drain should only be connected at the EPM end of the cable.

- If you are using an RBA, the drain must be spliced so the drain is continuous from the junction box to the EPM. A 10 AWG Wire is required to connect the EPM ground post to the traffic cabinet ground rod.
- Using a digital voltmeter, you should measure 0 Ohms between the EPM Ground Post and the traffic cabinet ground rod.

SPECIFICATION:	0 Ohms
MEASURED:	

Intersection:	
Camera Serial Number:	
GS₂ Processor Serial Number:	



ITEM #1113901A — CAMERA CABLE

Description: Furnish and install Camera Cable continuous between the Video Detector Assembly (VDA) and Video Detection Processor (VDP).

Materials:

Camera Cable:

- Supply the VDA power and return the video signal to the VDP.
- Composite construction or as recommended by camera manufacturer.
 - Coaxial:
 - 20 AWG, solid conductor.
 - Polyethylene foam dielectric.
 - Minimum 95% bare copper braid shield.
 - Power/ Control:
 - 5 conductors 18 AWG, 7 strand conductor, shielded.
- Polyethylene or polyvinyl chloride jacket.
- Other type cable may be substituted at the request of the VDP manufacturer.
- Connectors:
 - Use compression type connectors with compression tool to make connections.

Method of Measurement:

Camera Cable will be measured for payment by the number of linear feet of cable furnished, installed and accepted.

Basis of Payment:

The Contract price per linear foot of “Camera Cable” shall include all connectors, labor, tools and equipment necessary to install the cable between the VDA and the VDP.

Pay Item	Pay Unit
Camera Cable	l.f.

ITEM#1118012A REMOVAL AND/OR RELOCATION OF TRAFFIC SIGNAL EQUIPMENT

Section 11.18: Replace the entire section with the following:

11.18.01 – Description:

Remove all abandoned traffic signal equipment. Restore the affected area. Where indicated on the plans remove and reinstall existing traffic signal equipment to the location(s) shown.

Lead paint is presumed present on the painted surface of all cabinets and structures located within project limits. Any activities performed by the contractor that results in a painted surface being impacted or altered, shall be performed in accordance OSHA Lead in Construction Standard 29CFR 1926.62, or the painted surface shall be tested prior to any paint being disturbed by a qualified third party hired by the contractor to confirm that no lead is present.

11.18.02 – Materials:

The related sections of the following specifications apply to all incidental and additional material required for the proper relocation of existing equipment and the restoration of any area affected by this work.

- Division III, “Materials Section” of the Standard Specifications.
- Current Supplemental Specifications to the Standard Specifications.
- Applicable Special Provisions to the Standard Specifications.
- Current Department of Transportation, Functional Specifications for Traffic Control Equipment.

Article 11.18.03 - Construction Methods:

Schedule/coordinate the removal and/or relocation of existing traffic signal equipment with the installation of new equipment to maintain uninterrupted traffic signal control. This includes but is not limited to vehicle signals and detectors, pedestrian signals and pushbuttons, co-ordination, and pre-emption.

Abandoned Equipment

The contract traffic signal plan usually does not show existing equipment that will be abandoned. Consult the existing traffic signal plan for the location of abandoned material especially messenger strand, conduit risers, and handholes that are a distance from the intersection. A copy of the existing plan is usually in the existing controller cabinet. If not, a plan is available from the Division of Traffic Engineering upon request.

Unless shown on the plans it is not necessary to remove abandoned conduit in-trench and conduit under-roadway

When a traffic signal support strand, rigid metal conduit, down guy, or other traffic signal equipment is attached to a utility pole, secure from the pole custodian permission to work on the pole. All applicable Public Utility Regulatory Authority (PURA) regulations and utility company requirements govern. Keep utility company apprised of the schedule and the nature of the work. Remove all abandoned hardware, conduit risers, and down guys, Remove anchor rods, to 6” (150mm) below grade.

When underground material is removed, backfill the excavation with clean fill material. Compact the fill to eliminate settling. Remove entirely the following material: pedestal foundation; controller foundation; handhole; pressure sensitive vehicle detector complete with concrete base. Unless otherwise shown on the plan, remove steel pole and mast arm foundation to a depth of 2 feet (600mm) below grade. Restore the excavated area to a grade and condition compatible with the surrounding area.

- If in an unpaved area apply topsoil and establish seeding in accordance with Section 9.44 and seed special provisions included in the contract.
- If in pavement or sidewalk, restore the excavated area in compliance with the applicable Sections of Division II, “Construction Details” of the Standard Specifications.

Relocated Equipment

In the presence of the Engineer, verify the condition of all material that will be relocated and reused at the site. Carefully remove all material, fittings, and attachments in a manner to safeguard parts from damage or loss. Replace at no additional cost, all material which becomes damaged or lost during removal, storage, or reinstallation.

Scrap and Salvage Equipment

Scrap Material	Stock No.
Copper Cable	N/A
Pedestrian Pushbutton and Sign	N/A

All material not listed as scrap or salvage becomes the property of the Contractor; which assumes all liability associated with material’s final disposition.

Article 11.18.04 – Method of Measurement:

This work will be measured as a Lump Sum.

Article 11.18.05 – Basis of Payment:

This work will be paid for at the contract lump sum price for “Removal and/or Relocation of Traffic Signal Equipment” which price shall include relocating signal equipment and associated hardware, all equipment, material, tools and labor incidental thereto. This price shall also include removing, loading, transporting, and unloading of signal equipment/materials designated for salvage and all equipment, material, tools and labor incidental thereto. This price shall also include

removing and disposing of traffic signal equipment not to be salvaged and all equipment, material, tools and labor incidental thereto.

Payment is at the contract lump sum price for "Removal and/or Relocation of Traffic Signal Equipment" inclusive of all labor, vehicle usage, storage, and incidental material necessary for the complete removal of abandoned equipment/material and/or relocation of existing traffic signal equipment/material. Payment will also include the necessary labor, equipment, and material for the complete restoration of all affected areas.

A credit will be calculated and deducted from monies due the Contractor equal to the listed value of salvage material not returned or that has been damaged and deemed unsalvageable due to the Contractor's operations.

Pay Item	Pay Unit
Removal and/or Relocation of Traffic Signal Equipment	L.S.

ITEM NO. 1118051A – TEMPORARY SIGNALIZATION (SITE NO. 1)

Description:

Work under this item shall consist of providing Temporary Signalization (TS) at the U.S. Route 7 (Ethan Allen Highway) at State Route 102 (Branchville Road) intersection.

The Contractor shall keep each traffic signal completely operational at all times during construction through the use of existing signal equipment, temporary signal equipment, new signal equipment, or any combination thereof once TS has started as noted in the section labeled “Duration.”

The Contractor shall furnish, install, maintain, and relocate equipment to provide a complete temporary traffic signal, including but not limited to the necessary support structures, electrical connection and disconnection (if required) and energy supply, vehicle and pedestrian indications, vehicle and pedestrian detection (paid for under Item #11112XXA – Temporary Detection {Site No. X}), pavement markings, and signing.

Materials:

- Pertinent articles of the Standard Specifications
- Supplemental Specifications and Special Provisions contained in this contract

Construction Methods: The Contractor shall perform a Preliminary Inspection and submit a Temporary Signalization (TS) Plan as described herein. No physical work will be allowed at any location until the requirements of the Preliminary Inspection and Temporary Signalization (TS) Plan have been met.

1. Preliminary Inspection

Prior to beginning any physical work, the Contractor shall meet with the Engineer and a representative from the DOT Electrical Maintenance Office (Town representative for a Town owned signal), to inspect and document (for the Engineer’s concurrence) the existing traffic signal’s physical and operational condition prior to implementing any Temporary Signalization (TS.) The inspection shall include, but not be limited to, the condition of the following:

- Controller Assembly (CA)
 - Controller Unit (CU)
 - Detection Equipment
 - Pre-emption Equipment
 - Coordination Equipment
- Vehicle and Pedestrian Signals
- Vehicle and Pedestrian Detectors
- Emergency Vehicle Pre-emption System (EVPS) *
- Interconnect Cable and Splice Enclosures
- Support Structures
- Handholes, Conduit and Cable

It may be necessary to repair or replace equipment that is missing, damaged, or malfunctioning. The Contractor shall prepare a list of items for replacement or repair. If authorized by the Engineer, this work will be considered “Extra Work” under Article 1.09.04.

The Preliminary Inspection meeting shall also include discussion of potential utility conflicts according to the *Utilities* section under *TS Plan* below.

2. Temporary Signalization (TS) Plan

At least 30 days prior to implementation of each stage, the Contractor shall submit a 1:40 (1:500 metric) scale TS plan in pdf format for each location to the Engineer for review and comment. This TS Plan shall include, but not be limited to the following:

- Survey Ties
- Dimensions of Lanes, Shoulders, and Islands
- Slope Limits
- Clearing and Grubbing Limits
- Signal Phasing and Timing
- Location of Signal Appurtenances such as Supports, Signal Heads, Pedestrian Push buttons, Pedestrian Signals
- Location of Signing and Pavement Markings (stop bars, lane lines, etc.)
- Location, method, and mode of Temporary Detection
- Location of utilities and potential conflicts

Review of the TS plan does not relieve the Contractor of ensuring the TS meets the requirements of the MUTCD. The existing traffic signal plan of record for State-owned traffic signals is available from the Division of Traffic Engineering upon request. The Contractor may request existing traffic signal plans for Town-owned traffic signals from the Town.

It is acceptable to use the existing traffic signal plan as the TS plan by marking up the existing plan to show any needed changes.

The Contractor shall not implement the TS plan until all review comments have been addressed.

The TS Plan shall also address the following elements:

Earthwork

The Contractor shall perform the necessary clearing and grubbing and the grading of slopes required for the installation, maintenance, and removal of the TS equipment. Upon termination of the TS, the Contractor shall restore the affected area to its prior condition and to the satisfaction of the Engineer.

Maintenance and Protection of Traffic

The Contractor shall furnish, install, maintain, relocate, and remove signal-related signing (lane-use, signal ahead, NTOR, etc.), and pavement markings, as needed.

The Contractor shall install, relocate, or remove, equipment in a manner to cause no hazard to pedestrians, traffic or property. The Contractor shall maintain traffic as specified in the Special Provisions “Prosecution and Progress” and “Maintenance and Protection of Traffic” in the Contract.

Utilities

The Contractor shall verify that proposed temporary and/or relocated signal equipment will not conflict with proposed project utility relocations. The Contractor shall ensure that temporary span/temporary poles will not restrict the ability to shift utility cables off of the poles.

The Contractor shall coordinate its TS activities with all utility companies in the project area to ensure that the proposed temporary and/or relocated signal equipment will not be in conflict with existing utilities. The Contractor shall coordinate any utility work that may be needed prior to the Contractor implementing the TS plan.

Electrical Service and Telephone Service

The Contractor shall be responsible for relocating and changing any electrical service or telephone service source if required. Any arrangements with these companies and costs associated with any relocation or change shall be paid for by the Contractor. The Contractor shall ensure that the party previously responsible for the monthly payment of service shall continue to be responsible for that payment during TS.

Temporary Signalization

The Contractor shall furnish, install, maintain, relocate, and remove existing, temporary, and proposed traffic signal equipment and all necessary hardware; modifications to or furnishing of a new CA; and reprogramming of the CU phasing and timing; and any other incidentals related to this TS, as many times as necessary for each stage/phase of construction to maintain and protect traffic and pedestrian movements as shown on the plans or as directed by the Engineer.

Inspection

When requested by the Engineer, the TS will be subject to a field review by a representative of the Division of Traffic Engineering and/or the Town, The Contractor shall revise the TS as needed to address comments.

Detection

The Contractor shall provide vehicle detection on the existing, temporary, and/or new roadway alignment for all intersection approaches that have existing detection, detection in the final condition as shown on the signal plan, or as directed by the Engineer. The Contractor shall keep existing pedestrian pushbuttons accessible and operational at all times during TS. Temporary Detection is described and is paid for under Item # 11112XXA - Temporary Detection (Site No. X)

Maintenance

Once TS is in effect, the Contractor shall assume all maintenance responsibilities of the entire installation in accordance with Section 1.07.12 of the Standard Specifications. The Contractor shall notify the Engineer for the project records the date that Temporary Signalization begins. The Contractor shall coordinate with the Engineer to notify the following parties that maintenance responsibility has been transferred to the Contractor:

- Signal Owner
 - CT DOT Electrical Maintenance Office or
 - Town Representative
- Local Police Department

The Contractor shall provide the Engineer a list of telephone numbers of personnel who will be on-call during TS and shall respond to traffic signal malfunctions by having a representative at the site within three hours from the initial contact. Any traffic signal malfunction shall be made operational according to plan within twenty-four (24) hours.

If the Engineer determines that the nature of a malfunction requires immediate attention and/or the Contractor does not respond within three (3) hours, then an alternate maintenance service will be called to repair the signal. Expenses incurred by the alternate maintenance service for each call will be deducted from monies due to the Contractor with a minimum deduction of \$1,000. The alternate maintenance service may be the owner of the signal or another qualified electrical contractor.

Duration

Temporary Signalization shall commence when the Contractor begins physical work at a particular intersection.

- a) For intersections with a State furnished controller, TS terminates when the inspection of the permanent signal is complete and operational and is accepted by the Engineer.
- b) For intersections with a Contractor furnished controller, Temporary Signalization terminates at the beginning of the 30 day test period for the permanent signal.

Ownership

The Contractor shall remove and deliver any existing equipment that is designated as salvage to its original owner upon completion of use. Any temporary equipment supplied by the Contractor shall be removed by the Contractor unless noted otherwise.

Method of Measurement:

Temporary Signalization (TS) shall be measured for payment as follows:

Fifty percent (50%) shall be paid when the TS for that site is operational as shown on the plan and to the satisfaction of the Engineer.

Fifty percent (50%) shall be paid upon termination of the TS as described herein.

Basis of Payment:

This work shall be paid at the contract Lump Sum price for “Temporary Signalization (Site No.)” for each site. This price includes the preliminary inspection, TS plan for each stage/phase, furnishing, installing, maintaining, relocating and revising traffic signal equipment, controller assembly modifications, controller unit program changes such as phasing and timing, removing existing, temporary, and proposed traffic signal equipment, arrangements with utility companies, towns or cities including the fees necessary for electric and telephone service, clearing and grubbing, earthwork and grading, area restoration and all necessary hardware, materials, labor, and work incidental thereto.

All material and work for signing and pavement markings is paid for under the appropriate Contract items.

All material and work necessary for vehicle and pedestrian detection for TS is paid for under item 11112XXA - Temporary Detection (Site No. X).

All Contractor supplied items that will remain the Contractor’s property shall be included in the contract Lump Sum price for “Temporary Signalization.”

Any items installed as part of the permanent installation will be paid for under those separate pay items in the Contract.

<u>Pay Item</u>	<u>Pay Unit</u>
Temporary Signalization (Site No.)	L.S.

ITEM NO. 1206023A - REMOVAL AND RELOCATION OF EXISTING SIGNS

Section 12.06 is supplemented as follows:

Article 12.06.01 – Description is supplemented with the following:

Work under this item shall consist of the removal and/or relocation of designated side-mounted extruded aluminum and sheet aluminum signs, sign posts, sign supports, and foundations where indicated on the plans or as directed by the Engineer. Work under this item shall also include furnishing and installing new sign posts and associated hardware for signs designated for relocation.

Article 12.06.03 – Construction Methods is supplemented with the following:

The Contractor shall take care during the removal and relocation of existing signs, sign posts, and sign supports that are to be relocated so that they are not damaged. Any material that is damaged shall be replaced by the Contractor at no cost to the State.

Foundations and other materials designated for removal shall be removed and disposed of by the Contractor as directed by the Engineer and in accordance with existing standards for Removal of Existing Signing.

Sheet aluminum signs designated for relocation are to be re-installed on new sign posts.

Article 12.06.04 – Method of Measurement is supplemented with the following:

Payment under Removal and Relocation of Existing Signs shall be at the contract lump sum price which shall include all extruded aluminum and sheet aluminum signs, sign posts, and sign supports designated for relocation, all new sign posts and associated hardware for signs designated for relocation, all extruded aluminum signs, sheet aluminum signs, sign posts and sign supports designated for scrap, and foundations and other materials designated for removal and disposal, and all work and equipment required.

Article 12.06.05 – Basis of Payment is supplemented with the following:

This work will be paid for at the contract lump sum price for “Removal and Relocation of Existing Signs” which price shall include relocating designated extruded aluminum and sheet aluminum signs, sign posts, and sign supports, providing new posts and associated hardware for relocated signs, removing and disposing of foundations and other materials, and all equipment, material, tools and labor incidental thereto. This price shall also include removing, loading, transporting, and unloading of extruded aluminum signs, sheet aluminum signs, sign posts, and sign supports designated for scrap and all equipment, material, tools and labor incidental thereto.

Pay Item
Removal and Relocation of Existing Signs

Pay Unit
L.S.

ITEM #1208931A – SIGN FACE - SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)

ITEM #1208932A – SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE SHEETING)

Section 12.08 is supplemented and amended as follows:

12.08.01—Description:

Add the following:

This item shall also include field testing of metal sign base posts as directed by the Engineer.

12.08.03—Construction Methods:

Delete the last sentence and add the following:

Metal sign base posts shall be whole and uncut. Sign base post embedment and reveal lengths shall be as shown on the plans. The Contractor shall drive the metal sign base posts by hand tools, by mechanical means or by auguring holes. If an obstruction is encountered while driving or placing the metal sign base post, the Contractor shall notify the Engineer who will determine whether the obstruction shall be removed, the sign base post or posts relocated, or the base post installation in ledge detail shall apply. Backfill shall be thoroughly tamped after the posts have been set level and plumb.

Field Testing of Metal Sign Posts: When the sign installations are complete, the Contractor shall notify the Engineer the Project is ready for field testing. Based on the number of posts in the Project, the Engineer will select random sign base posts which shall be removed by the Contractor for inspection and measurement by the Engineer. After such inspection is completed at each base post location, the Contractor shall restore or replace such portions of the work to the condition required by the Contract. Refer to the table in 12.08.05 for the number of posts to be field tested.

12.08.04—Method of Measurement:

Add the following:

The work required to expose and measure sign base post length and embedment depth using field testing methods, and restoration of such work, will not be measured for payment and shall be included in the general cost of the work.

12.08.05—Basis of Payment:

Replace the entire Article with the following:

This work will be paid for at the Contract unit price per square foot for “Sign Face - Sheet Aluminum” of the type specified complete in place, adjusted by multiplying by the applicable Pay Factor listed in the table below. The price for this work shall include the completed sign, metal sign post(s), span-mounted sign brackets and mast arm-mounted brackets, mounting hardware, including reinforcing plates, field testing, restoration and replacement of defective base post(s), and all materials, equipment, and work incidental thereto.

Pay Factor Scale: Work shall be considered defective whenever the base post length or base post embedment depth is less than the specified length by more than 2 inches. If the number of defects results in rejection, the Contractor shall remove and replace all metal sign base posts on the Project, at no cost to the Department.

Number of Posts to be Tested and Pay Factors (Based on Number of Defects)

Number of Posts in Project =>	51-100	101-250	251-1000	>1000
Sample Size=>	5 Posts	10 Posts	40 Posts	60 Posts
0 Defects	1.0	1.0	1.025	1.025
1 Defect	0.9	0.95	0.975	0.983
2 Defects	Rejection	0.9	0.95	0.967
3 Defects	Rejection	Rejection	0.925	0.95
4 Defects	Rejection	Rejection	0.9	0.933
5 Defects	Rejection	Rejection	Rejection	0.917
6 Defects	Rejection	Rejection	Rejection	0.9
7 or more Defects	Rejection	Rejection	Rejection	Rejection

Note: Projects with 50 or fewer posts will not include field testing