



CONTRACT BID DOCUMENTS

FOR

LOT/CIP PROJECT NO. L028-0001 REHABILITATION OF HALLS HILL ROAD COLCHESTER, CT

PREPARED FOR:

TOWN OF COLCHESTER
127 NORWICH AVENUE
COLCHESTER, CT 06415

JANUARY 2020



ANCHOR
ENGINEERING SERVICES, INC.

41 Sequin Drive
Glastonbury, CT 06033

T: 860.633.8770

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TABLE OF CONTENTS

SECTION	TAB
INVITATION TO BID	A
INSTRUCTIONS TO BIDDERS	B
FORMS	C
Bid Proposal Form	
Bidder Contract Compliance Monitoring Report	
Non-Collusion Affidavit	
Bid Bond	
Agreement	
Construction Performance Bond	
Construction Payment Bond	
GENERAL CONDITIONS	D
SUPPLEMENTARY CONDITIONS.....	E
SPECIAL PROVISIONS.....	F
STATE CONTRACT PROVISIONS.....	G
PREVAILING WAGE RATE INFORMATION.....	H
COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES (CHRO)	
CONTRACT COMPLIANCE.....	I
PLANS	J
APPENDIX.....	K
Town of Colchester Conservation Commission Permit	
Town of Colchester Planning & Zoning Commission Notice of Decision	
Right of Entry Permission Forms	

TAB A

Invitation to Bid

INVITATION TO BID REHABILITATION OF HALLS HILL ROAD

The Town of Colchester, Connecticut is soliciting sealed bids for the Rehabilitation of Halls Hill Road.

The project consists of pavement milling for the entire length of Halls Hill Road (4,000+/- L.F), HMA installation, maintenance and protection of traffic, catch basin top replacements, installation of 1,900+/- linear feet of new concrete sidewalk with ADA sidewalk ramps, turf establishment, signs and pavement marking installation.

A pre-bid meeting will be held at the Colchester town hall at 10:00 a.m. prevailing time on Thursday, February 20, 2020. Attendance is mandatory.

Sealed Bids will be received at the office of the First Selectman of the Town of Colchester, 127 Norwich Avenue, Suite 201, Colchester, Connecticut, 06415; Attention: Ms. Mary Bylone, First Selectman until but no later than 2:00 p.m. prevailing time on Wednesday, March 4, 2020, at which time and place said Bids will be opened publicly and read aloud.

The Contract Documents, including specifications and drawings, may be examined at the office of the First Selectman at the Colchester Town Hall, 127 Norwich Avenue, Colchester, CT during regular business hours. Copies of the Contract Documents may be downloaded from the Town of Colchester's website, <https://www.colchesterct.gov/doing-business-colchester>, under the RFP/RFQ tab.

A satisfactory Bid Bond or Certified Check, in an amount equal to five percent (5%) of the base bid, shall be submitted with each bid. The Bid Bond shall be made payable to Town of Colchester and shall be properly executed by the Bidder and acceptable sureties. All bonds must be from sureties registered in the State of Connecticut.

This contract is subject to state set-aside and contract compliance requirements. See CHRO Requirements in Contract Documents.

No Bidder may withdraw his Bid for a period of sixty (60) days after the date of Bid opening.

The award of a Contract, if awarded, will be the lowest responsible qualified bidder, provided that the bid is reasonable and that it is in the best interest of the Town of Colchester to accept such bid. The Town reserves the right to accept or reject any or all Bids, or waive any technicality in any Bid or part thereof, if deemed to be in the best interest of the Town of Colchester.

Mary Bylone
First Selectman
Purchasing Authority

TAB B

Instructions to Bidders

INSTRUCTIONS TO BIDDERS

1. PROJECT DESCRIPTION:

The project consists of pavement milling for the entire length of Halls Hill Road (4,000+/- L.F), HMA installation, maintenance and protection of traffic, catch basin top replacements, installation of 1,900+/- linear feet of new concrete sidewalk with ADA sidewalk ramps, turf establishment, signs and pavement marking installation.

2. GENERAL:

Sealed Bids will be received for the **REHABILITATION OF HALLS HILL ROAD** at the office of the First Selectman of the Town of Colchester, 127 Norwich Avenue, Suite 201, Colchester, Connecticut, 06415 Attention: Ms. Mary Bylone, First Selectman until but no later than 2:00 p.m. prevailing time on Wednesday, March 4, 2020.

3. CONTRACT DOCUMENTS:

These Contract Documents include a complete set of Bidding Forms to be used by the bidder. Division II Construction Details and Division III Materials Section in the State of Connecticut Department of Transportation (CTDOT) Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817, dated 2016 and including the latest supplemental specifications, which are incorporated herein and are referred to herein after as "Form 817," which is part of the contract, may be purchased from CTDOT –DOT Print Shop, (860) 594-3086.

4. BIDS:

Bid Documents shall be enclosed in a sealed envelope addressed to the Colchester First Selectman and clearly marked "**SEALED BID – REHABILITATION OF HALLS HILL ROAD**" along with the name of Bidder, date and time of Bid opening in order to guard against premature opening of the Bid.

All Bids must be submitted on forms supplied by the Owner and shall be subject to all requirements of the Contract Documents, including "Instructions to Bidders." All Bids must be regular in every respect; no interlineations, ditto marks, excisions or special conditions shall be made or included in the Bid Form by the Bidders.

The Owner may consider as irregular any Bid on which there are any omissions, alterations of form, additions not called for, conditional or alternate Bids, or irregularities of any kind and, at its option, may reject same. The blank spaces in the proposal must be filled in correctly where indicated for each and every item for which a quantity is given typed or printed in ink. If any price is omitted, the Bid may be rejected. The Bidder shall sign his proposal correctly. If the proposal is made by an individual, his name and post office address must be shown. If made by a firm, partnership, or by a corporation, the proposal must be signed by an official of the firm, partnership, or corporation authorized to sign contracts, and also must show the post office address of the firm, partnership or corporation.

A Non-Collusion Affidavit shall be completed and returned with the submitted Bid. More than one proposal from an individual, a firm or partnership, a corporation or association under the same or different names will not be considered. Reasonable ground for believing that any Bidder is

interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. Proposals in which the prices are obviously unbalanced may be rejected.

Failure to return the following completed forms and information with the bid proposal(s) will disqualify the Contractor's bid:

1. Bidder Contract Compliance Monitoring Report, in accordance with part 14 of this section and Tab I.
2. Non-Collusion Affidavit
3. Bid Security
4. Bidders Qualification Statement, in accordance with part 7 of this section.

5. ADDENDA & INTERPRETATIONS:

Any request from a prospective Bidder for interpretation of meaning of Contract Drawings, Specifications or other Contract Documents shall be made in writing to the office of Anchor Engineering Services, Inc. 41 Sequin Dr. Glastonbury, CT 06033 and to be given consideration must be received at least seven (7) days prior to date fixed for opening of proposals. Such requests may be sent via facsimile (fax) to Anchor Engineering Services, Inc. (860) 633-5971 or e-mail mzessin@anchorengr.com. Interpretations will be made in the form of written Addenda to Contract Documents, which Addenda shall become a part of the Contract. Not later than three (3) days prior to date fixed for opening of proposals, Addenda will be mailed or delivered to all parties recorded as having obtained Contract Documents. Failure of any Bidder to receive any such addenda shall not relieve Bidder from any obligations under his proposal as submitted. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6. SITE CONDITIONS:

All information on the Drawings or in the contract Documents relating to subsurface conditions, utilities, and other structures is from best sources available at present to the Owner. All such information and drawings of existing construction are furnished only for the information and convenience of Bidders.

At the date fixed for opening of Bids, it will be presumed that each Bidder has made an examination of location and site of work to be done under Contract; has satisfied himself as to actual conditions, requirements and quantities of work; has considered federal, state and local laws and regulations that may affect cost, progress, performance or furnishing the Work; and has read and become thoroughly familiar with Contract Documents including Contract Drawings, Specifications, Addenda, and documents referenced therein.

The Owner and the Engineer assume no responsibility whatsoever with respect to ascertaining for the Contractor any facts concerning physical characteristics at the site of the project.

A mandatory pre-bid meeting will be held at the town hall at 10:00 a.m. prevailing time on Thursday, February 20, 2020.

7. BIDDER'S QUALIFICATIONS:

All bidders shall provide information with their bids demonstrating their qualifications to perform the work. At a minimum, each bidder must provide the following information:

- Evidence of Bidder's qualification to business in the State of Connecticut as well as copies of all required professional licenses.
- A list of present commitments or obligations that may delay the work.
- A list of the major tasks to be completed on the job as well as who will be performing each task (i.e. your company or a subcontractor). If a subcontractor will be utilized, please identify their name.
- A list of relevant project experience demonstrating ability to complete job within the time required and within the established budget. A minimum of four or five references and project owner's primary contact from construction projects completed in the last four years (note: projects shall be competitively bid, and preferably lump sum (as opposed to unit price) contracts. Preference is for projects of similar size and scope to this, with minimum contract value of \$250,000. Please also provide the original contract value (at time of contract signing) and final contract value (upon project completion), including all change orders.

The Owner shall make such investigation as deemed necessary to determine the ability of the Bidder to discharge his Contract. After Bid opening, Bidder shall be prepared to furnish the Owner with any additional written evidence as may be required for this purpose within five (5) days after Owner requests such evidence.

Bids received from Bidders who have previously failed to complete contracts within the time required, or who have previously performed similar work in an unsatisfactory manner, may be rejected. A Bid may be rejected if the Bidder cannot show that he has the necessary capital and experience, and owns, controls, or can procure the necessary plant to commence and complete the work at the rate or time specified, and that he is not already obligated for the performance of other work which would delay the commencement, prosecution, or completion of the work.

Please note that the prime contractor is required to self-perform a minimum of 50% of the original total contract value.

8. MODIFICATION:

Any Bidder may modify his Bid at any time prior to the scheduled closing time for receipt of Bids, by submitting an appropriate document duly executed in a manner that Bid must be executed and delivered to the place where Bids are to be submitted. After opening of Bids, no Bidder may withdraw his proposal for a period of sixty (60) days. Owner may, in its sole discretion, release any Bid prior to that date.

9. REJECTION OF BIDS:

The Owner also reserves the right to reject any or all Bids, for any reason it deems advisable, and to award Contract or Contracts to any of the Bidders, regardless of amount of Bid.

10. TIME OF COMPLETION & LIQUIDATED DAMAGES:

The Bidder must agree to fully complete all work within the number of consecutive calendar days of the issuance of the Notice to Proceed set forth in the Agreement. The Bidder must agree also to pay as liquidated damages the sum set forth in the Agreement for each consecutive calendar day thereafter.

11. AWARD OF CONTRACTS:

If the Contract(s) is (are) awarded, Owner will give successful Bidder(s) a Notice of Award within forty five (45) days after the day of Bid opening. The successful Bidder(s) shall then execute and deliver to the Owner, within ten (10) days after notification of the award, three (3) executed Agreements, Final Certificate of Insurance, Performance Bond, Payment Bond and Contractors Minority Business Enterprise Utilization Form on forms provided by the Owner. If a successful Bidder fails to comply with the requirements of these documents within ten (10) days of receiving said Notice, that Bidder shall forfeit Bid Security and, at the option of the Owner, the Award may become null and void. The Owner may then proceed to Award the Contract(s) to another of the Bidders.

Nonresident contractors shall comply with the State of Connecticut Department of Revenue Services (DRS) Special Notice SN 2012(2) 2011 Legislative Changes to the Procedures Governing Nonresident Contractors.

12. BID SECURITY:

Each Bid must be accompanied by a surety bond in the amount of 5% of the total of the Bid with the forms supplied by the Owner. A certified check will not be acceptable. Bid security of the successful Bidder will be retained until such Bidder has executed the Agreement, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh day after the Effective Date of the Agreement or the sixty-first day after Bid opening, whereupon the Bid security furnished by such Bidders will be returned. Bid security with Bids which are not competitive will be returned within seven (7) days of Bid opening.

13. SECURITY FOR FAITHFUL PERFORMANCE:

In addition to the Agreement, a successful Bidder shall also provide, within the time stipulated, a Construction Performance Bond by a company satisfactory to the Owner in an amount equal to One Hundred Percent (100%) of Estimated Total Contract Price recorded in the Proposal section of the Contract as executed, and a Construction Payment Bond in like amount will be required from the successful Bidder for faithful performance of the Contract.

14. COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES (CHRO) CONTRACT COMPLIANCE (See Tab I):

The grantee and their contractors will need to comply with 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5 of the Connecticut General Statutes (C.G.S.). The above statutes and regulations require the grantee

to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” on projects. **All bidders must complete, sign, and return the “CHRO Bidder Contract Compliance Monitoring Report” form to the grantee at the time of bid opening. Bids not including this form should be considered incomplete and rejected.** This form is attached, and can also be found at: <http://www.ct.gov/chro/lib/chro/pdf/notificationtobidders.pdf>

The contractor who is selected to perform this State project must comply with CONN. GEN. STAT. §§ 4a- 60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services (“DAS”) under the provisions of CONN. GEN. STAT. § 4a-60g. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

For municipal public works contracts and quasi-public agency projects, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at:

http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806

For Contracts Equal to or Greater than \$500,000.00

The contract cannot be awarded until:

The Contractor has submitted an approved Affirmative Action Plan to CHRO

OR

Authorization has been obtained from CHRO to execute contract and retain 2% per month of the total contract value until CHRO approves the Contractor’s Affirmative Action Plan.

TAB C

Forms

Bid Proposal

Bidder Contract Compliance Monitoring Report

Non-Collusion Affidavit of Bidder

Bid Bond

Agreement

Performance Bond

Payment Bond

Anchor Engineering Services, Inc.

Rehabilitation of Halls Hill Road
Colchester, CT

BID PROPOSAL

**BID PROPOSAL
REHABILITATION OF HALLS HILL ROAD**

PROJECT IDENTIFICATION:

Rehabilitation of Halls Hill Road

THIS BID IS SUBMITTED TO:

Town of Colchester
First Selectman
127 Norwich Avenue, Suite 201
Colchester, Connecticut 06415
Attention: Mary Bylone

The Undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

Bidder accepts all terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty (60) days after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within ten (10) days after the date of Owner's Notice of Award.

In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

1. Bidder has examined and carefully studied the Bidding Documents and the following Addenda receipt all of which is hereby acknowledged (List Addenda by Addendum Number and Date):

2. Bidder has examined and carefully studied the Contract Documents including the Commission on Human Rights and Opportunities (CHRO) Contract Compliance requirements.
3. Bidder has visited the work areas and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
4. Bidder is familiar with and is satisfied as to all federal, state and local Laws and regulations that may affect cost, progress, performance and furnishing of the Work.
5. Bidder has carefully studied all reports and explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or

subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Utilities at or contiguous to the site. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder and safety precautions and programs related thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of the Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

6. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
7. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
8. Bidder has given Engineer written notice of all conflicts, errors, ambiguities or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
9. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
10. The bidder shall fill in, unit bid prices, written in numbers and in words and an extended price in numbers based on the estimated quantities shown. It is understood that the unit prices shown in numbers shall govern in case of discrepancy between unit prices in words and the extended prices.
11. Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

UNIT PRICE SCHEDULE

ITEM NO.	SPECIFICATION SECTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE(\$)	EXTENDED PRICE(\$)
1.	0201001 A CLEARING & GRUBBING	L.S.	1	_____	_____
UNIT PRICE IN WORDS: _____					
2.	0202000 EARTH EXCAVATION	C.Y.	175	_____	_____
UNIT PRICE IN WORDS: _____					
3.	0202529 CUT BITUMINOUS CONCRETE PAVEMENT	L.F.	750	_____	_____
UNIT PRICE IN WORDS: _____					
4.	0209001 FORMATION OF SUBGRADE	S.Y.	250	_____	_____
UNIT PRICE IN WORDS: _____					
5.	0212000 SUBBASE	C.Y.	56	_____	_____
UNIT PRICE IN WORDS: _____					
6.	0219001 SEDIMENTATION CONTROL SYSTEM	L.F.	150	_____	_____
UNIT PRICE IN WORDS: _____					
7.	0304002 PROCESSED AGGREGATE BASE	C.Y.	28	_____	_____
UNIT PRICE IN WORDS: _____					
8.	0406171 HMA S0.5	TON	2680	_____	_____
UNIT PRICE IN WORDS: _____					

ITEM NO.	SPECIFICATION SECTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE(\$)	EXTENDED PRICE(\$)
9.	0406999 A ASPHALT ADJUSTMENT COST	EST.	1	<u>\$3,000.00</u>	<u>\$3,000.00</u>
UNIT PRICE IN WORDS: _____					
10.	0426275 A FINE MILLING OF BITUMINOUS CONCRETE (0" TO 4")	S.Y.	14,000	_____	_____
UNIT PRICE IN WORDS: _____					
11.	0506016 A PRECAST CONCRETE SEGMENTAL RETAINING WALL	S.F.	400	_____	_____
UNIT PRICE IN WORDS: _____					
12.	0586001.10 A TYPE "C" CATCH BASIN 0-10' DEEP	EA.	1	_____	_____
UNIT PRICE IN WORDS: _____					
13.	0586750 A TYPE "C" CATCH BASIN TOP	EA.	9	_____	_____
UNIT PRICE IN WORDS: _____					
14.	0586760 A TYPE "C-L" CATCH BASIN TOP	EA.	3	_____	_____
UNIT PRICE IN WORDS: _____					
15.	0586790.10 A REMOVE DRAINAGE STRUCTURE - 0'-10' DEEP	EA.	1	_____	_____
UNIT PRICE IN WORDS: _____					
16.	0811001 CONCRETE CURB	L.F.	30	_____	_____
UNIT PRICE IN WORDS: _____					

ITEM NO.	SPECIFICATION SECTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE(\$)	EXTENDED PRICE(\$)
17.	0815001 BITUMINOUS CONCRETE LIP CURBING	L.F.	1,000	_____	_____
UNIT PRICE IN WORDS: _____					
18.	0921001 A CONCRETE SIDEWALK	S.F.	9,000	_____	_____
UNIT PRICE IN WORDS: _____					
19.	0921002 A CONCRETE SIDEWALK 8" THICK	S.F.	2,235	_____	_____
UNIT PRICE IN WORDS: _____					
20.	0921006 A INTEGRAL CONCRETE SIDEWALK	S.F.	425	_____	_____
UNIT PRICE IN WORDS: _____					
21.	0921039 DETECTABLE WARNING STRIP	EA.	24	_____	_____
UNIT PRICE IN WORDS: _____					
22.	0922500 BITUMINOUS CONCRETE DRIVEWAY (COMMERCIAL)	S.Y.	400	_____	_____
UNIT PRICE IN WORDS: _____					
23.	0922501 BITUMINOUS CONCRETE DRIVEWAY	S.Y.	170	_____	_____
UNIT PRICE IN WORDS: _____					
24.	0950020 A SITE RESTORATION AND SEEDING	L.S.	1	_____	_____
UNIT PRICE IN WORDS: _____					

ITEM NO.	SPECIFICATION SECTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE(\$)	EXTENDED PRICE(\$)
25.	0970006 TRAFFICPERSON (MUNICIPAL POLICE OFFICER)	EST.	1	\$5,000.00	\$5,000.00
UNIT PRICE IN WORDS:		<u>Five thousand dollars and zero cents</u>			
26.	0970007 TRAFFICPERSON (UNIFORMED FLAGGER)	HR.	100		
UNIT PRICE IN WORDS:					
27.	0971001 A MAINTENANCE AND PROTECTION OF TRAFFIC	L.S.	1		
UNIT PRICE IN WORDS:					
28.	0975004 MOBILIZATION AND PROJECT CLOSEOUT	L.S.	1		
UNIT PRICE IN WORDS:					
29.	0980001 CONSTRUCTION STAKING	L.S.	1		
UNIT PRICE IN WORDS:					
30.	1111201 A TEMPORARY DETECTION (SITE NO. 1)	L.S.	1		
UNIT PRICE IN WORDS:					
31.	1111401 A LOOP VEHICLE DETECTOR	EA.	3		
UNIT PRICE IN WORDS:					
32.	1111451 A LOOP VEHICLE SAWCUT	L.F.	160		
UNIT PRICE IN WORDS:					

ITEM NO.	SPECIFICATION SECTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE(\$)	EXTENDED PRICE(\$)
33.	1117111 A RECTANGULAR RAPID FLASHING BEACON (RRFB) - TYPE B	EA.	4	_____	_____
UNIT PRICE IN WORDS: _____					
34.	1118051 A TEMPORARY SIGNALIZATION (SITE NO. 1)	L.S.	1	_____	_____
UNIT PRICE IN WORDS: _____					
35.	1206023 A REMOVAL AND RELOCATION OF EXISTING SIGNS	L.S.	1	_____	_____
UNIT PRICE IN WORDS: _____					
36.	1208932 A SIGN FACE SHEET ALUMINUM (TYPE IV RETROREFLECTIVE SHEETING)	S.F.	170	_____	_____
UNIT PRICE IN WORDS: _____					
37.	1210102 4" YELLOW EPOXY RESIN PAVEMENT MARKINGS	L.F.	7,400	_____	_____
UNIT PRICE IN WORDS: _____					
38.	1210104 8" WHITE EPOXY RESIN PAVEMENT MARKINGS	L.F.	240	_____	_____
UNIT PRICE IN WORDS: _____					
39.	1210105 EPOXY RESIN PAVEMENT MARKINGS, SYMBOLS AND LEGENDS	S.F.	1,550	_____	_____
UNIT PRICE IN WORDS: _____					
40.	1302047 RESET GATE BOXES	EA.	5	_____	_____
UNIT PRICE IN WORDS: _____					

ITEM NO.	SPECIFICATION SECTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE(\$)	EXTENDED PRICE(\$)
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41.	1303196 A RELOCATE FIRE HYDRANT	EA.	1	_____	_____
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UNIT PRICE IN WORDS: _____

42.	1403501 RESET MANHOLE (SANITARY SEWER)	EA.	5	_____	_____
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UNIT PRICE IN WORDS: _____

TOTAL OF ESTIMATED PRICE (ITEMS #1-42): (\$ _____)

(use words)

Quantities are not guaranteed. Final payment will be based on actual quantities.

- 12. Bidder agrees that the Work will be substantially completed and completed and ready for final payment in accordance with Article 14 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 13. Bidder accepts the provisions of the Agreement as to liquidate damages in the event of failure to complete the Work within the times specified in the Agreement.
- 14. Communications concerning this proposal shall be addressed to the address of bidder below.
- 15. Terms used in this proposal which are defined in the General Conditions or Proposal will have the same meanings indicated in the General Conditions or Proposal Instructions.

SUBMITTED on: _____, 2020.

By: _____ Title: _____

Bidder: _____

Address: _____

SEAL – if Proposal is by a Corporation

BIDDER CONTRACT COMPLIANCE MONITORING REPORT

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in 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 Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) **Definition of Small Contractor**

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists.

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes ___ No ___ -Bidder is a minority business enterprise Yes ___ No ___ (If yes, check ownership category) Black ___ Hispanic ___ Asian American ___ American Indian/Alaskan Native ___ Iberian Peninsula ___ Individual(s) with a Physical Disability ___ Female ___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes___ No___
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes___ No___	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes___ No___
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes___ No___	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes___ No___
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes___ No___	9. Does your company have a mandatory retirement age for all employees? Yes___ No___
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes ___ No ___	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes ___ No ___ NA ___
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes ___ No ___	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes ___ No ___ NA ___
6. Does your company have a collective bargaining agreement with workers? Yes___ No___ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes___ No___ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes___ No___	12. Does your company have a written affirmative action Plan? Yes ___ No ___ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes ___ No ___ If yes, give name and phone number. _____

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)	3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source		
State Employment Service				Work Experience	
Private Employment Agencies				Ability to Speak or Write English	
Schools and Colleges				Written Tests	
Newspaper Advertisement				High School Diploma	
Walk Ins				College Degree	
Present Employees				Union Membership	
Labor Organizations				Personal Recommendation	
Minority/Community Organizations				Height or Weight	
Others (please identify)				Car Ownership	
				Arrest Record	
				Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
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NON-COLLUSION AFFIDAVIT OF BIDDER

NON-COLLUSION AFFIDAVIT OF BIDDER

State of: _____)
_____) SS:
County of: _____)

_____ ; being first duly sworn, deposes and says that:

- 1.) He is the owner, partner, officer, representative or agent of the Bidder that has submitted the attached Bid:
- 2.) He is fully informed regarding the preparation and contents of the attached Bid and of all pertinent circumstances regarding such Bid:
- 3.) Such Bid is genuine and is not a collusive or sham Bid:
- 4.) Neither the said Bidder nor any of its officers, partners, owner, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any Bidder, or to fix any overhead, profit or cost element of the bid price or the bid price of any other Bidder or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage with the Town of Colchester or any person interested in the proposed Contract.
- 5.) The price quoted in the attached Bid is fair and proper and is not tainted by collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest.

Signed: _____

Title: _____

Subscribed and sworn before me this _____ day of _____, 2020.

Notary Public: _____

My Commission expires _____, _____

BID BOND

BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

BID

Bid Due Date:

Project (Brief Description Including Location):

BOND

Bond Number:

Date (Not later than Bid due date):

Penal sum

_____)
(Words)

_____)
(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

(Seal
)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Anchor Engineering Services, Inc.

Rehabilitation of Halls Hill Road
Colchester, CT

AGREEMENT

AGREEMENT

BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is dated as of the _____ day of _____ in the year _____ by and between the Town of Colchester (hereinafter called OWNER) _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Rehabilitation of Halls Hill Road as described by the specifications and shown on the drawings contained therein.

Article 2. ENGINEER

The Project has been designed by:

Anchor Engineering Services, Inc.
41 Sequin Drive
Glastonbury, Connecticut 06033
Phone: (860) 633-8770

who is hereinafter called ENGINEER and who is to act as OWNER's representative from time to time, assume some duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents. OWNER will perform most of the duties associated with processing applications for payments in lieu of ENGINEER.

Article 3. CONTRACT TIMES

- 3.1 The Work will be completed within ninety-five (95) calendar days of issuance of Notice to Proceed as provided in paragraph 2.03 of the General Conditions and are exclusive of the winter shutdown period (December 1 through the following March 31).
- 3.2 *Liquidated Damages.* OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER may suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER seven hundred fifty dollars (\$750.00) for

each calendar day that expires after the time specified in paragraph 3.1 for Completion until the Work is substantially complete as defined in Section 14.04 of the General Conditions. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the time specified in paragraph 3.1 for completion and readiness for final payment or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER three hundred fifty dollars (\$350.00) for each calendar day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment.

Article 4. CONTRACT PRICE

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 4.1, 4.2 below:

- 4.1 In accordance with the Unit Price Schedule of the Contractor’s Bid (BP-1 thru BP-8)
- 4.2 The total estimated base price based on estimated quantities is (final payment will be based on actual quantities):

(in numbers)

(in words)

Article 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER or ENGINEER as provided in the General Conditions and Supplementary Conditions.

5.1 *Progress Payments; Retainage.* OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by the ENGINEER, each month during construction as provided in paragraphs 5.1.1 and 5.1.2. below. All such payments will be measured by the schedule of values established in paragraph 2.07 of the General Conditions (and in the case of Unit Price Work based on the number of units completed), or, in the event there is no schedule of values, as provided in the General Requirements.

5.1.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions.

95% of Work completed (with the balance being retainage).

90% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in paragraph 14.02 of the General Conditions).

- 5.1.2 Upon Substantial Completion, in an amount sufficient to increase total payments to CONTRACTOR to 98% of the Contract Price (with the balance being retainage), less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions.
- 5.2 *Final Payment.* At the end of the One Year Correction Period, the CONTRACTOR shall submit to ENGINEER an Application for Payment of the retainage in accordance with paragraph 14.07 of the General Conditions.

Article 6. INTEREST

All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum rate allowed by law at the place of the project.

Article 7. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

- 7.1 CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents including "technical data".
- 7.2 CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 7.3 CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- 7.4 CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.0.2 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph 4.0.2 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 4.0.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations,

explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

- 7.5 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.
- 7.6 CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- 7.7 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written solution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 8. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1 This Agreement (pages A-1 to A-6, inclusive).
- 8.2 Exhibits to this Agreement (Exhibits A, B, C, D, E,).
- 8.3 Exhibit A – Contractor’s Certificate of Insurance
- 8.4 Exhibit B – Contractor’s Performance Bond & Payment Bond.
- 8.5 Exhibit C – Contractor’s Bid Proposal
- 8.6 Exhibit D – Bid Addenda (if any....)
- 8.7 Exhibit E – Notice to Proceed
- 8.8 Exhibit F – Original Bid Documents
- 8.9 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to paragraph 3.0.4 of the General Conditions.

The documents listed in paragraphs 8.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed in this Article 8. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.0.4 of the General Conditions.

Article 9. MISCELLANEOUS

- 9.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 9.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may

become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

- 9.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
- 9.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement, in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR or identified by OWNER and CONTRACTOR or identified by ENGINEER on their behalf.

This Agreement will be effective on _____, 2020, (which is the Effective Date of the Agreement).

OWNER: Town of Colchester

CONTRACTOR: _____

By: _____

By: _____

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest _____

Attest _____

Address for giving notices:

Address for giving notices:

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Agreement.)

License No. _____

Agent for service of process: _____

(If CONTRACTOR is a corporation, attach evidence of authority to sign.)

PERFORMANCE BOND

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By:

Signature and Title

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest:

Signature and Title

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By:

Signature and Title

(Attach Power of Attorney)

Attest:

Signature and Title:

EJCDC No. C-610 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.

3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:

3.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and

3.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 3.1; and

3.3. Owner has agreed to pay the Balance of the Contract Price to:

1. Surety in accordance with the terms of the Contract;
2. Another contractor selected pursuant to Paragraph 4.3 to perform the Contract.

4. When Owner has satisfied the conditions of Paragraph 3, Surety shall promptly and at Surety's expense take one of the following actions:

4.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and Contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
2. Deny liability in whole or in part and notify Owner citing reasons therefor.

5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

8. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

12.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker
Owner's Representative (engineer or other party)

Anchor Engineering Services, Inc.

Rehabilitation of Halls Hill Road
Colchester, CT

PAYMENT BOND

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest: _____

Signature and Title

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

Attest: _____

Signature and Title:

EJCDC No. C-615 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:

6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

**FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker:
Owner's Representative (engineer or other party):**

TAB D

General Conditions

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



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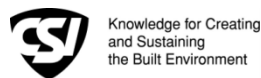
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Construction Specifications Institute

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

TABLE OF CONTENTS

Page

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY	6
1.01 <i>Defined Terms</i>	6
1.02 <i>Terminology</i>	8
ARTICLE 2 - PRELIMINARY MATTERS	9
2.01 <i>Delivery of Bonds and Evidence of Insurance</i>	9
2.02 <i>Copies of Documents</i>	9
2.03 <i>Commencement of Contract Times; Notice to Proceed</i>	9
2.04 <i>Starting the Work</i>	9
2.05 <i>Before Starting Construction</i>	9
2.06 <i>Preconstruction Conference</i>	9
2.07 <i>Initial Acceptance of Schedules</i>	9
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	10
3.01 <i>Intent</i>	10
3.02 <i>Reference Standards</i>	10
3.03 <i>Reporting and Resolving Discrepancies</i>	10
3.04 <i>Amending and Supplementing Contract Documents</i>	11
3.05 <i>Reuse of Documents</i>	11
3.06 <i>Electronic Data</i>	11
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS	11
4.01 <i>Availability of Lands</i>	11
4.02 <i>Subsurface and Physical Conditions</i>	12
4.03 <i>Differing Subsurface or Physical Conditions</i>	12
4.04 <i>Underground Facilities</i>	13
4.05 <i>Reference Points</i>	13
4.06 <i>Hazardous Environmental Condition at Site</i>	13
ARTICLE 5 - BONDS AND INSURANCE	14
5.01 <i>Performance, Payment, and Other Bonds</i>	14
5.02 <i>Licensed Sureties and Insurers</i>	15
5.03 <i>Certificates of Insurance</i>	15
5.04 <i>Contractor's Liability Insurance</i>	15
5.05 <i>Owner's Liability Insurance</i>	16
5.06 <i>Property Insurance</i>	16
5.07 <i>Waiver of Rights</i>	17
5.08 <i>Receipt and Application of Insurance Proceeds</i>	17
5.09 <i>Acceptance of Bonds and Insurance; Option to Replace</i>	17
5.10 <i>Partial Utilization, Acknowledgment of Property Insurer</i>	18
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES	18
6.01 <i>Supervision and Superintendence</i>	18
6.02 <i>Labor; Working Hours</i>	18
6.03 <i>Services, Materials, and Equipment</i>	18
6.04 <i>Progress Schedule</i>	18
6.05 <i>Substitutes and "Or-Equals"</i>	19
6.06 <i>Concerning Subcontractors, Suppliers, and Others</i>	20
6.07 <i>Patent Fees and Royalties</i>	21
6.08 <i>Permits</i>	21
6.09 <i>Laws and Regulations</i>	21
6.10 <i>Taxes</i>	22
6.11 <i>Use of Site and Other Areas</i>	22
6.12 <i>Record Documents</i>	22
6.13 <i>Safety and Protection</i>	22
6.14 <i>Safety Representative</i>	23
6.15 <i>Hazard Communication Programs</i>	23

6.16	<i>Emergencies</i>	23
6.17	<i>Shop Drawings and Samples</i>	23
6.18	<i>Continuing the Work</i>	24
6.19	<i>Contractor's General Warranty and Guarantee</i>	24
6.20	<i>Indemnification</i>	24
6.21	<i>Delegation of Professional Design Services</i>	25
ARTICLE 7 - OTHER WORK AT THE SITE		25
7.01	<i>Related Work at Site</i>	25
7.02	<i>Coordination</i>	26
7.03	<i>Legal Relationships</i>	26
ARTICLE 8 - OWNER'S RESPONSIBILITIES		26
8.01	<i>Communications to Contractor</i>	26
8.02	<i>Replacement of Engineer</i>	26
8.03	<i>Furnish Data</i>	26
8.04	<i>Pay When Due</i>	26
8.05	<i>Lands and Easements; Reports and Tests</i>	26
8.06	<i>Insurance</i>	26
8.07	<i>Change Orders</i>	26
8.08	<i>Inspections, Tests, and Approvals</i>	26
8.09	<i>Limitations on Owner's Responsibilities</i>	27
8.10	<i>Undisclosed Hazardous Environmental Condition</i>	27
8.11	<i>Evidence of Financial Arrangements</i>	27
ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION.....		27
9.01	<i>Owner's Representative</i>	27
9.02	<i>Visits to Site</i>	27
9.03	<i>Project Representative</i>	27
9.04	<i>Authorized Variations in Work</i>	27
9.05	<i>Rejecting Defective Work</i>	27
9.06	<i>Shop Drawings, Change Orders and Payments</i>	28
9.07	<i>Determinations for Unit Price Work</i>	28
9.08	<i>Decisions on Requirements of Contract Documents and Acceptability of Work</i>	28
9.09	<i>Limitations on Engineer's Authority and Responsibilities</i>	28
ARTICLE 10 - CHANGES IN THE WORK; CLAIMS		28
10.01	<i>Authorized Changes in the Work</i>	28
10.02	<i>Unauthorized Changes in the Work</i>	29
10.03	<i>Execution of Change Orders</i>	29
10.04	<i>Notification to Surety</i>	29
10.05	<i>Claims</i>	29
ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK.....		30
11.01	<i>Cost of the Work</i>	30
11.02	<i>Allowances</i>	31
11.03	<i>Unit Price Work</i>	31
ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES		32
12.01	<i>Change of Contract Price</i>	32
12.02	<i>Change of Contract Times</i>	33
12.03	<i>Delays</i>	33
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.....		33
13.01	<i>Notice of Defects</i>	33
13.02	<i>Access to Work</i>	33
13.03	<i>Tests and Inspections</i>	33
13.04	<i>Uncovering Work</i>	34
13.05	<i>Owner May Stop the Work</i>	34
13.06	<i>Correction or Removal of Defective Work</i>	34
13.07	<i>Correction Period</i>	34
13.08	<i>Acceptance of Defective Work</i>	35
13.09	<i>Owner May Correct Defective Work</i>	35
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION		36
14.01	<i>Schedule of Values</i>	36
14.02	<i>Progress Payments</i>	36
14.03	<i>Contractor's Warranty of Title</i>	37
14.04	<i>Substantial Completion</i>	37

14.05	<i>Partial Utilization</i>	38
14.06	<i>Final Inspection</i>	38
14.07	<i>Final Payment</i>	38
14.08	<i>Final Completion Delayed</i>	39
14.09	<i>Waiver of Claims</i>	39
ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION.....		39
15.01	<i>Owner May Suspend Work</i>	39
15.02	<i>Owner May Terminate for Cause</i>	39
15.03	<i>Owner May Terminate For Convenience</i>	40
15.04	<i>Contractor May Stop Work or Terminate</i>	40
ARTICLE 16 - DISPUTE RESOLUTION		41
16.01	<i>Methods and Procedures</i>	41
ARTICLE 17 - MISCELLANEOUS		41
17.01	<i>Giving Notice</i>	41
17.02	<i>Computation of Times</i>	41
17.03	<i>Cumulative Remedies</i>	41
17.04	<i>Survival of Obligations</i>	41
17.05	<i>Controlling Law</i>	41
17.06	<i>Headings</i>	41

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other

Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents, or

b. does not meet the requirements of any applicable inspection, reference standard, test, or

approval referred to in the Contract Documents, or

c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or
2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract.

Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as

necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous

areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further

disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified

in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on

a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the

Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions,

and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK;
ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and

Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall

be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted

by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance

with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be

governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

T A B L E

Supplementary Conditions

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the General Conditions and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 REVISIONS:

1.01.29 Engineer

After the word “performed,” add the words “Owner may designate in writing one or more authorized representatives who shall have express authority to bind the Owner with respect to matters requiring Owner’s approval or authorization. The Engineer does not have such authority. The term “Owner” means the Owner, and the Owner’s Authorized Representative. The Owner’s Authorized Representative is not to be confused with the owner’s representative to which Article 9 refers.”

Add the following:

1.01.53 Project Manager

The person employed by the Town of Colchester on behalf of the owner. All major decisions and determinations required during the work will be made jointly by the owner, and the project manager; and if applicable, the architect/engineer, however, instructions to the contractor are to be from the Owner. If the contractor performs work beyond the scope of the project at the direction or request of any person other than the owner, it will be at his own risk and expense. If this work must be removed or revised, that also will be at the expense of the contractor.

ARTICLE 2 REVISIONS:

2.05 Before Starting Construction

To Paragraph 2.05.A, after the word “review,” add the words “and Owner’s approval:”

Delete Article 2.05.A.3 and replace with the following new Article 2.05.B.1.:

Documentation submitted by CONTRACTOR prior to execution of Agreement shall include a preliminary schedule of values for all of the Work that includes quantities and prices of items which, when added together, equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work. The approved schedule of values shall follow the format provided in the Bidding Documents.

2.07 Initial Acceptance of Schedules

To Paragraph 2.07.A, after the word “Engineer,” in line 4, add the words “and Owner”. And after the word “Engineer” in line 10, add the words “for its review and the Owner’s approval.”

To Paragraph 2.07.A.1, after the word "Engineer," in line 2, add the words "and Owner". And after the word "Engineer" in line 4, add the words "and Owner." And after the word "therefore" in line 8, add "The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. A Contractor's construction schedule and any and all updates shall be prepared and maintained by the Contractor using the Critical Path Method and shall contain a minimum of 25 activities. The Contractor shall submit its schedules to the Owner and Engineer at regular intervals, not to exceed one month. Each submittal shall include, at a minimum, plots of bar charts showing progress of the Work, Total Float and Critical Paths, in addition to a listing of the supporting data organized in tabular form. The Contractor's construction schedule updates shall identify the Work completed to date based on completed activities as a percentage of the total Work."

To Paragraph 2.07.A.2, after the word "Engineer," in line 2, add the words "and Owner".

To Paragraph 2.07.A.3, after the word "Engineer," in line 2, add the words "and Owner".

ARTICLE 3 REVISIONS:

3.07 Add the following:

The Contract Documents are complementary; what is called for by one is as binding as if called for by all. In resolving conflicts, errors, and discrepancies, the documents shall be given precedence in the following order: Agreement, Specifications, Drawings. Within the specifications the order of precedence shall be as follows: Special Provisions, Instructions to Bidders, General Conditions, Technical Provisions. Figure dimensions on Drawings shall govern over scale/dimensions, and detailed Drawings shall govern over general Drawings. The Contractor assumes full responsibility for having familiarized itself with the nature and extent of the Contract Documents, work, locality, and local conditions that may in any manner affect the work to be done.

ARTICLE 4 REVISIONS:

4.01 Availability of Lands

Add the following:

- D. If the Contractor, by direct negotiation and bargaining with any land owner, lessee or tenant, has secured for himself any right to use more space or greater privileges in the space provided for purposes incidental to the performance of the Contract, he shall, upon request of the Owner's Representative, furnish to the Owner's Representative proper evidence that such additional right have been properly secured and assurance that no damage to or claim upon the Owner will arrive there from. The Owner shall not be liable in any way for any expense incurred by the Contractor in securing any such right to use additional property.

- E. If access is provided by means of any road or driveway or through private lands, the Contractor shall permit the regular Owners or users thereof to use the same so far as it is consistent with the construction of the work. If any existing driveway or road is damaged by his use thereof, the Contractor shall at once restore it to as good condition as it would have been had he not used it. The Contractor and those under him using any private road or driveway must assume to use that road or driveway on an "as is" basis and use it at their own risk. Neither the Owner nor the land owner shall be liable for damage to persons or property of the Contractor's forces arising from any defect in such road or driveway, except as such defect may be the consequence of negligence of the Owner or the land owner after the award of the Contract.

4.05 Reference Points

To Paragraph 4.05.A, after the word "Work," in line 4, add the words "The Contractor shall be entitled to rely on the accuracy of the information furnished by the Owner unless the Contractor has actual knowledge to the contrary."

ARTICLE 5 REVISIONS:

5.01 Performance, Payment, and Other Bonds

To Paragraph 5.01.A, add "The Contractor shall deliver the executed, approved bonds to the Owner at the time of execution of this Contract. In the alternative, Contractor shall furnish Owner with an irrevocable, documentary standby letter of credit in the amount of the Contract sum. The letter of credit may be drawn upon by the Owner if a default under the Contract occurs and/or to pay any Liquidated Damages Amount. If the Owner draws on the letter of credit to pay any of the Liquidated Damages amounts, the Contractor shall remain liable for any remaining Liquidated Damages Amount after such draw(s). The letter of credit (a) shall be in a form and by a financial institution reasonably acceptable to the Owner, (b) shall be payable on sight draft, in partial draws, if applicable, to Owner without other conditions except for the beneficiaries certificate that it is entitled to draw thereon, (c) shall not expire prior to Final Completion of the Work, and (d) shall be for an initial term of one (1) year, which term shall be automatically renewable for subsequent one-year terms thereafter, or for an initial term of one (1) year with a provision that the Owner receive thirty (30) days prior written notice of the termination date of the letter of credit, at which time the Owner may draw on the letter of credit, whether or not a default under the Contract exists, prior to such termination date; provided, however, that such letter of credit shall be returned no later than thirty (30) days following Final Completion of all of the work. The Contractor shall deliver such executed, approved letter of credit to Owner at the time of the execution of this Contract."

5.03 Certificates of Insurance

To Paragraph 5.03.A, add "Contractor shall also deliver to Owner copies of each of the insurance policies required of Contractor under this Contract, including without limitation, declarations, and any other document evidencing types of coverage, limits of coverage, insureds, and additional insureds."

5.04 Contractor's Liability Insurance

Add the following:

- C. The insurance required by Paragraph 5.04 shall be written for not less than amounts set forth below or required by law, whichever coverage is greater. Coverages shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. Such coverages shall be maintained by insurance carriers acceptable to Owner and Owner's lender in all respects.
1. Workers' Compensation and Employer's Liability Insurance: Workers' Compensation limits shall not be less than those statutorily required by the State of Connecticut and shall include Employers Liability limits of liability of \$1,000,000 bodily injury per accident/employee; \$1,000,000 bodily injury per disease/employee; \$1,000,000 policy by disease;
 2. Commercial General Liability Insurance: Limits of liability shall not be less than Two Million dollars (\$2,000,000) per occurrence combined Bodily Injury and Property Damage and Four Million dollars (\$4,000,000) in the aggregate. The limits may be provided through a combination of Primary and Umbrella/Excess Liability policies acceptable to the Owner;
 3. Commercial Automobile Liability Insurance: Limits of liability shall not be less than Two Million dollars (\$2,000,000) per occurrence combined Bodily Injury and Property Damage. The limit may be provided through a combination of Primary and Umbrella/Excess Liability policies acceptable to the Owner;
 4. The Contractor shall, within 30 days of being awarded the contract, provide the Owner with copies of the insurance policies required of it under this contract, each of which names the Town of Colchester and Anchor Engineering Services, Inc. as additional insureds, with the Town of Colchester as the Certificate Holders. The "Hold Harmless" endorsement of the insurance shall include the interest of the Town of Colchester. The Contractor and Subcontractors and other interests shall be so named. The policy shall insure against all risks of physical damages except as modified by the Contract Documents and subject to the normal all risk exclusions.
 5. The amount of insurance contained in aforementioned insurance coverage shall not be construed to be a limitation of the obligation or liability on the part of the Contractor or any of its subcontractors under the provisions of this Contract or at law.
 6. The aforementioned insurance coverage outlined in this section and any other coverage that Contractor may consider necessary are the Contractor's sole responsibility and any deficiency in coverage or policy limits of the Contractor will be the sole responsibility of the Contractor.
 7. In the event of failure of the Contractor to furnish and maintain the aforementioned insurance and to furnish satisfactory evidence thereof, such failure shall constitute a breach of this Contract and the Owner shall have the right, in addition to any other rights, to immediately cancel and terminate this Contract without any further costs to

the Owner or, at the Owner's option, to take out and maintain the same on behalf of the Contractor who agrees to furnish all necessary information relative thereto and to pay the cost thereof to the Owner immediately upon presentation of a bill

- D. Insurance requirements shall also apply to all Subcontractors, and the Contractor shall not allow any Subcontractor to commence work until the Subcontractor's insurance has been obtained.

5.06 Property Insurance

Delete Paragraph 5.06.A.2, and replace with the following new Paragraph 5.06.A.2: "Property insurance shall be on an "all-risk" form and shall include, without limitation, insurance against earthquake, flood, windstorm, falsework, testing and startup, demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Engineer's and Contractor's services and expenses required as a result of such insured loss."

To Paragraph 5.06.B, in line 10, delete the words "and shall be listed as an insured or additional insured."

5.07 Waiver of Rights

To Paragraph 5.07.A, in line 14, delete the words "Owner and", replace the word "waive," with "waives", and after the word "against", add "Owner." From line 15, delete the word "their" and replace with "its". Add "The Contractor shall require of the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of the Owner. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged."

Add the following:

- D. Claims for Consequential Damages. Except as otherwise provided in the Contract Documents, the Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:
1. damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
 2. damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 15. Nothing contained in this section 5.07 shall

be deemed to preclude an award of liquidated non-consequential damages, when applicable, in accordance with the requirements of the Contract Documents.”

ARTICLE 6 REVISIONS:

Add the following:

6.10 Supervision and Superintendence

To Paragraph 6.01.A, after the phrase “Contract Documents” in line 5, add “in a manner consistent with the degree of care and skill usually exercised by contractors experienced in projects of similar scope and in accordance with the standards of skill and care expected of contractors experienced in projects similar to the Project. Under no circumstances shall the quality and completeness of Work be less than recognized industry standards.”

To Paragraph 6.01.B, add “The Superintendent shall be satisfactory to the Owner and the Owner shall have the right to request Contractor to dismiss from the Project any Superintendent whose performance is not satisfactory to Owner. In the event Owner and Contractor fail to agree as to whether such dismissal is warranted, the Engineer shall make such determination and both parties shall agree to abide by the decision of the Engineer. The Contractor shall not replace the Superintendent without the consent of the Owner, which consent shall not be unreasonably withheld.”

6.02 Labors; Working Hours

To Paragraph 6.02.A, after the word “Site” in line 5, add “The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors. If the Owner or Engineer has reasonable objection to an employee of the Contractor or any of its Subcontractors, the Contractor must submit an acceptable substitute person or entity to the Owner.”

6.04 Progress Schedule

To Paragraph 6.04.A.1, after the words “Engineer for”, add “review and Owner”.

6.06 Concerning Subcontractors, Suppliers, and Others

To Paragraph 6.06.A, add “Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Owner will promptly reply to the Contractor in writing stating whether or not the Owner or the Engineer, after due investigation, has reasonable

objection to any such proposed person or entity. Failure of the Owner or Engineer to reply promptly shall constitute notice of no reasonable objection.”

To Paragraph 6.06.G, add “Any part of the work performed for the Contractor by a Subcontractor shall be pursuant to a written Subcontract between the Contractor and Subcontractor. Copies of all Subcontractor bids or proposals, and ultimately, subcontracts, shall, upon request of Owner, be submitted to Owner and Engineer.”

Add the following:

“H. The Contractor shall obtain lien waivers from Subcontractors and material suppliers upon payment to such parties and shall supply copies of the same to Owner promptly upon receipt thereof. If Contractor fails to comply with the provisions of this Paragraph 6.06.H, and for so long as such failure continues, Owner may make all payments attributable to a Subcontractor or material supplier co-payable to the Contractor and such Subcontractor or material supplier.”

6.08 Permits

To Paragraph 6.08.A, add “The Contractor will perform and complete the Work in accordance with all requirements of law and with the Contract Documents and no work shall be undertaken until the Contractor has been issued all required permits. Contractor shall prosecute all work diligently to assure completion no later than the date specified therefore.”

6.09 Laws and Regulations

To Paragraph 6.09.A, after the word “Work” in line 3, add “Contractor shall review the Contract Documents and notify the Owner and the Engineer of any discrepancy between building codes and regulations of which the Contractor has actual knowledge without independent investigation. The Contractor shall not violate any zoning, set-back or other locational requirements of applicable laws, codes or ordinances, or of any recorded covenants of which the Contractor has actual knowledge. If the Contractor observes or is told by any building inspector that portions of the Contract Documents are at variance with applicable laws, statutes ordinances, building codes, rules or regulations, the Contractor shall promptly notify the Engineer and Owner in writing, and necessary changes shall be accomplished by appropriate modification.”

Add the following:

“D. The Contractor shall be responsible to procure Certificate(s) of Occupancy, if required, from the authorities having jurisdiction.”

“E. The Contractor shall maintain policies of employment as follows:

1. The Contractor and the Contractor’s subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor shall take affirmative action to insure that

applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

2. The Contractor and the Contractor's Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin."

6.10 Taxes

To Paragraph 6.10.A, add "The Contractor shall not be paid or reimbursed for any state, consumer, use, service, ad valorem or other tax paid by the Contractor related to the performance of the Work. The Town of Colchester is exempt from payment of taxes. Therefore, the Contractor should obtain from the Owner's Department of Finance tax exempt certificates for each of the Contractor's vendors and suppliers in order to avoid the imposition of any of the aforesaid taxes. In any event, the Owner will not pay or reimburse the Contractor for any taxes that the Contractor may pay in the performance of the Work."

6.11.A.1 Use of Site and Other Areas

- A.1 "The exact limit of Work and equipment storage shall be verified and agreed to by Owner and Contractor in the field."

6.12 Record Documents

To Paragraph 6.12.A, add "In the event that either party to this Agreement terminates the Agreement, the Contract Documents and Project files that were maintained in paper and electronic formats shall be the property of and reside with the Owner."

6.19 Contractor's General Warranty and Guaranty

To Paragraph 6.19.A, after the word "guarantee" in line 5, add "The Contractor warrants to the Owner and Engineer that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner or Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor further warrants and represents that:

1. The Contractor is financially solvent, able to pay all debts as they mature and possessed of sufficient working capital to complete the work and perform all obligations under the Contract Documents;
2. the Contractor is able to furnish the tools, materials, supplies, equipment and labor required to complete the work and perform all obligations under the Contract Documents, and has sufficient experience and competence to do so;
3. the Contractor is authorized to do business in the state where the Project is located and is properly licensed by all necessary governmental, public and other authorities having jurisdiction over the Contractor and the Project;
4. the persons executing the Contract Documents are authorized to do so;
5. the Contractor has visited the site of the Project and become familiar with the Contract Documents and the conditions of the site, and knows of no reason why the work cannot be performed as set forth in the Contract Documents;
6. The Contractor shall warrant all Work for a period of one (1) year after Final Completion; and
7. The Contractor shall assign any extended warranties (in excess of the Contractor's one (1) year warranty) on equipment and materials furnished as part of the Work to the Owner."

6.20 Indemnification

To Paragraph 6.20.A, after the word "performance" in line 10, add "or non-performance".

6.22 Prevailing Wage Rate Requirements

- A. "Town of Colchester construction contracts are subject to Connecticut's prevailing wage law as codified in Connecticut General Statutes Section 31-53 and 31-53a. The Contractor shall be required to comply with all requirements of Connecticut's prevailing wage laws if the project value exceeds the monetary thresholds which are described in Connecticut General Statutes Section 31-53(g)."
- "B. Upon the award of the Contract, the Contractor shall certify, under oath, to the Labor Commissioner the pay scale to be used by the Contractor and any of its Subcontractors for the work to be performed under the Contract. Additionally, the Contractor and any of its Subcontractors must file certified payrolls with the Owner containing information, including but not limited to, employee names; occupations; hours worked; rates paid; and the employers compliance with various provisions of law.
- C. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not

permit employment of unfit persons or persons not skilled in tasks assigned to them in either its own organization, or in any of its subcontractor's respective organizations. All work required to be done by persons licensed under all applicable governmental requirements and codes shall be performed by such licensed persons. Contractor agrees to maintain a harmonious job site and to use laborers, suppliers and subcontractors that will not cause any labor disruptions or disharmony in connection with the performance of the Work or any other work being performed at the Project. Contractor agrees to address any labor disputes or disruptions promptly."

ARTICLE 7 REVISION:

7.01 Related Work at Site

To Paragraph 7.01.C, after the word "Engineer" in line 4, add "and Owner."

ARTICLE 8 REVISION:

8.11 Evidence of Financial Arrangements

Delete Paragraph 8.11.A in its entirety.

ARTICLE 9 REVISION:

9.04 Authorized variations in Work

To Paragraph 9.04.A, after the word "Engineer," in line 1, add the words "after having received approval from the Owner,".

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

Delete Paragraph 9.08.A in its entirety.

9.09 Limitations on Engineer's Authority and Responsibility

Add the following:

"F. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Owner's designated representative about matters arising out of or relating to the Contract. Communications by and with the Engineer's consultants shall be through the Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner's designated representative."

ARTICLE 10 REVISIONS:

10.05 Claims

Delete Paragraph 10.05.E in its entirety.

ARTICLE 11 REVISIONS:

Add the following:

11.04 Equipment Rental Rates Not Otherwise Covered

With regard to rental rates applicable to work not covered by either Lump Sum pay items or Unit Adjustments, for any power-operated machinery, trucks or equipment, necessary to use, the Engineer will allow the Contractor the rental rate set forth in the most current edition of the "Rental Rate Blue Book," including all Rate Adjustment Tables and amendments, as published by Dataquest, Inc. of San Jose, California in effect at the time the work is performed for Contractor-owned equipment or at a lower rate, if submitted by the Contractor.

- A. Should the proper completion of the work require equipment of a type not covered by the above-mentioned schedule, the Engineer will allow Contractor a reasonable rental rate which shall be based on that prevailing in the area of the work and shall be agreed upon in writing before the work is begun. However, the Contractor shall show the sources for the rates he has proposed.
- B. For power-operated machinery, truck or equipment, which the Contractor must obtain by rental, he shall inform the Engineer of his need to rent the equipment prior to using it on the work. He shall be paid the actual rental for the equipment, provided that rate does not exceed the rental rate set forth in the "Rental Rate Blue Book", including all Rate Adjustment Tables and amendments as published by Dataquest, Inc. The Contractor shall provide a copy of the paid receipt for the rental expense incurred.
- C. The estimated operating cost per hour will apply only to the actual time the equipment is operating. Operators will be paid as stated hereinbefore for labor except for certain trucks listed in the "Rental Rate Blue Book" as published by Dataquest, Inc. which show the operators to be included.
- D. For rented equipment not owned by the Contractor or a subsidiary of the Contractor, the following rates shall apply:
 - 1. The daily rate per hour shall apply when the equipment is specifically assigned to the work by the Engineer for a period of 7 consecutive calendar days or less.
 - 2. The weekly rate per hour shall apply when the assigned time exceeds 7 consecutive calendar days but does not exceed 21 calendar days.
 - 3. The monthly rate per hour shall apply when the assigned time exceeds 21 consecutive calendar days.
- E. For Contractor-owned equipment or equipment rented or obtained from a subsidiary of the Contractor, the maximum hourly rate to be used shall be the monthly rate as set forth in the current edition of the "Rental Rate Blue Book", including Rate Adjustment Tables and amendments as published by Dataquest, Inc., divided by 176 (176 working hours per month).

ARTICLE 12 REVISIONS:

12.03 Delays

To Paragraph 12.03.B, after the words “equitable adjustment in” in line 6, delete the words “Contract Price or the”, and after the words “Contract Times, delete the words “, or both”. Add “Such an adjustment to the Contract Time shall be the Contractor’s sole and exclusive remedy for the delays discussed in this paragraph 12.03.”

To Paragraph 12.03.C, after the words “Contract Times” in line 9, add the words “and only to the extent that the critical path to the Project Schedule is extended.”

ARTICLE 13 REVISIONS:

13.03 Delays

Delete section 13.03.B, and replace with the following new section 13.03.B:

“All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be retained by the contractor as part of his obligation. The owner reserves the right to approve/disapprove the firm(s) selected to perform any and all tests/inspections and to be given a copy of any reports thus generated.

Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

Any authorized agent of the Municipality shall be permitted to inspect the project in general or any of its phases. “

13.07 Correction Period

To Paragraph 13.07.A, after the words “the date of” in line 1, delete the words “Substantial Completion”, and replace with the words “Final Completion.”

ARTICLE 14 REVISIONS:

14.01 Schedule of Values

To Paragraph 14.01.A, after the words “acceptable to Engineer” in line 4, add the words “and Owner.”

14.02.C Payment Becomes Due

To Paragraph 14.02.C.1, add “In no event shall the Owner be obligated to pay the Contractor for more than the amount certified by the Engineer for each Application for Payment, plus any pending change orders that the Owner agreed to approve.”

14.07 Final Payment

Add Paragraph 14.07.D – Acceptance of Final Payment as Release

The acceptance by the contractor of final payment shall be and shall operate as a release to the owner of all claims and all liability to the contractor for all things done or furnished in connection with this work and for every act and neglect of the owner and others relating to or arising out of this work. No payment, final or otherwise, shall operate to release the contractor or his subcontractors or his surety from any obligation under this contract or the bonds affixed thereto.

Add the Following:

14.10 Withholding of Payments

The Owner may withhold payments necessary to pay laborers, mechanics, apprentices and trainees employed by the contractor or subcontractor on the work, the full amount of wages required by the contract. In the event of failure to pay any laborer, mechanic, apprentice or trainee employed or working on the site of the project or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project, all or part of the wages required by the contract, the Municipality may, after written notice to the contractor, sponsor, applicant or owner, 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.

ARTICLE 15 REVISIONS:

Delete the word “persistent” from Article 15.0.2.A.1

15.03 Owner may Terminate for Convenience

To Paragraph 15.03.A.1, delete from line 3 the words “including fair and reasonable sums for overhead and profit on such Work.”

To Paragraph 15.03.A.2, delete from line 5 the words “plus fair and reasonable sums for overhead and profit on such expenses.”

To Paragraph 15.03.A.4, add “, but no overhead and profit on work not executed.”

Add the following:

“C. In no event shall the Contractor or any Subcontractor employed on the Project be entitled to profit, overhead, or damages on work that was not performed as of the date of termination, regardless of the reasons for termination.”

“D. Upon receipt of written notice from the Owner of such termination for the Owner’s convenience, the Contractor shall:

1. cease operations as directed by the Owner in the notice;
2. take actions necessary, or that the Owner may direct, for the protection and preservation of the Work;
3. except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders; and
4. provide a detailed inventory to the Owner that indicates the value, nature, and description of all material, labor, and equipment supplied as of the date of termination.”

ARTICLE 16 REVISIONS:

Delete Paragraph 16.01.A, and replace with the following new Paragraph 16.01.A.:

“Owner, in its sole discretion, may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05. The mediation will be governed by the Construction Industry Mediation Rules of the American Dispute Resolution Center, New Britain, Connecticut, currently in effect.”

Delete Paragraph 16.01.C, and replace with the following new Paragraph 16.01.C:

“Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived in the Contract Documents, shall, at the sole discretion of the Owner, be subject to arbitration. If the Owner chooses to Arbitrate the Claims, the arbitration shall be in accordance with the Construction Industry Arbitration Rules of the American Dispute Resolution Center, New Britain, Connecticut, currently in effect. The demand for arbitration shall be filed in writing with the other party to the Contract and with the American Dispute Resolution Center, and a copy shall be filed with the Engineer.”

ARTICLE 17 REVISIONS:

Add the following:

17.07 Time for Completion and Liquidated Damages:

- A. It is hereby understood and mutually agreed, by and between Contractor and Owner, that the date of beginning and the time for completion as specified in the Agreement of the work to be done hereunder are essential conditions of this Contract; and it is further mutually understood and agreed that the Work embraced in this Agreement shall be commenced on a date to be specified in the Notice to Proceed.
- B. Contractor agrees that said Work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion thereof within the

time specified. It is expressly understood and agreed, by and between Contractor and Owner, that the time for the completion of the Work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and conditions in this locality.

- C. If said Contractor shall neglect, fail or refuse to complete the Work within the time herein specified, or any proper extension thereof granted by Owner, then the Contractor does hereby agree to pay to Owner the amount specified in the Agreement, not as a penalty but as Liquidated Damages for such breach of Agreement, for each and every calendar day that Contractor shall be in default after the time stipulated in the Agreement for completing the Work.
- D. The said amount is fixed and agreed upon by and between Contractor and Owner because of the impracticality and extreme difficulty of fixing and ascertaining the actual damages Owner would in event sustain, and said amount shall be retained from time to time by the Owner from current periodical estimates.
- E. It is further agreed that time is of the essence of each and every portion of this contract and of the specification wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any of the work, the new time limit fixed by such extension shall be of the essence of this contract, provided that the contractor shall not be charged with liquidated damages or any excess cost when the owner determines that the contractor is without fault and the contractor's reasons for the time extension are acceptable to the owner, provided further that the contractor shall not be charged with liquidated damages or any excess cost when the delay of completion of the work is due:
 - 1. to any preference, priority or allocation order duly issued by the government;
 - 2. to unforeseeable cause beyond the control and without the fault or negligence of the contractor, including but not restricted to, acts of the owner, acts of another contractor in the performance of a contract with the owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and/or
 - 3. to any delays of subcontractors or suppliers occasioned by any of the causes specified in the preceding two paragraphs, provided further that the contractor shall, within ten (10) days from the beginning of such delay, unless the owner shall grant a further period of time prior to the date of final settlement of the contract, notify the owner, in writing, of the cause of delay, who shall ascertain the facts and extent of the delay and notify the contractor within a reasonable time of its decision in the matter.

17.08 REQUIRED PROVISIONS DEEMED INSERTED:

Each and every provision of law required to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein.

If through mistake or otherwise any provision is not inserted, or is inserted incorrectly then upon the application of either party the contract shall be amended to make such insertion or correction.

17.09 EMPLOYMENT OF CERTAIN PERSONS PROHIBITED:

No person under the age of sixteen and no person who at the present time is serving sentence in a penal or correctional institute shall be employed on the work covered by this contract.

17.10 OTHER PROHIBITED INTERESTS:

No official of the owner who is authorized solely or jointly to negotiate, make, accept, or approve any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the owner who is authorized in a capacity to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or any part thereof.

17.11 NO CONFLICT

No member or Delegate to Congress of the United States, and no Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit to arise from the same.

17.12 SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION:

In order to protect the life and health of his employees under the contract, the contractor shall comply with all pertinent provision of the Contract Work Hours and Safety Act commonly known as the Construction Safety Act as pertains to health and safety standards; and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under this contract.

The contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operation.

17.13 PROJECT MANAGER'S AUTHORITY:

The project manager shall give all orders and directions contemplated under this contract and specifications relative to the execution of the work. The project manager shall determine the amount, quality, acceptability and fitness of the several kinds of work and materials which are

to be paid for under this contract and shall decide all questions which may arise in relation to the work. The project manager's estimates and decisions shall be final and conclusive, except as otherwise provided. In case any question shall arise between the parties hereto relative to the contract or specifications, the determination or decision of the project manager shall be a condition precedent to the right of the contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.

The project manager shall decide the meaning and intent of any portion of the specifications and of any plan or drawing where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the contractor and any other contractors performing work for the owner shall be adjusted and determined by the project manager.

17.14 NOTICE AND SERVICE THEREOF:

Any notice from the owner to any contractor regarding any part of this contract shall be in writing and considered delivered and the service thereof completed when the notice is posted by certified or registered mail to the contractor at his last given address, or delivered in person to the contractor or his authorized representative on the work site.

17.15 ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS:

The contractor may be furnished additional instructions and detail drawings as necessary to carry out the work included in the contract.

The additional drawings and instructions thus supplied to the contractor will coordinate with the contract documents. The contractor shall carry out the work in accordance with the additional detail drawings and instructions. The contractor and the project manager will prepare jointly (a) a schedule, fixing the dates at which specific detail drawings will be required, such drawings, if any, to be furnished by the project manager in accordance with said schedule and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacturer's testing, installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule is subject to change in accordance with actual work progress.

17.16 CONTRACTOR'S TITLE TO MATERIAL:

No materials or supplies for the work shall be purchased by the contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The contractor warrants that he has good title to all materials and supplies used in the work, free from all liens, claims or encumbrances.

17.17 PREVAILING WAGE RATES:

Prevailing wage rates will be applicable for bids over \$100,000 per C.G.S. 31-53g. It is the contractor's responsibility to obtain the annual prevailing wage rate increases directly from the State Department of Labor website. The owner will not allow additional costs for Labor rate increase during the course of the project.

17.18 SUBCONTRACTING:

The contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The contractor shall not award any work to any subcontractor without the approval of the owner. Approval will not be given until the contractor submits to the owner a written statement including appropriate certifications concerning the proposed award to the subcontractor, which statement will contain such information as the owner may require.

The contractor shall be as fully responsible to the owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons employed directly by him.

The contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the contractor by the terms of the general conditions and other contract documents insofar as applicable to the work of subcontractors and to give the contractor the same power as regards terminating any subcontract that the owner may exercise over the contractor under any provision of the contract documents.

Nothing contained in this contract shall create any contractual relation between any subcontractor and the owner.

The contractor shall insert these same general and supplemental conditions in any subcontract he awards.

17.19 MUTUAL RESPONSIBILITY OF CONTRACTORS:

If through acts of neglect on the part of the contractor, any other contractor or subcontractor shall suffer loss or damage on work, the contractor agrees to settle with such other contractor or subcontractor by agreement or arbitration if the other contractor or subcontractor shall assert any claim against the owner on account of any damage alleged to have been sustained, the owner shall notify the contractor, who shall indemnify and save harmless the owner against any such claim.

17.20 WEATHER CONDITIONS:

In the event of temporary suspension of work, or during inclement weather, or whenever the project manager shall direct, the contractor will, and will cause his subcontractors to, carefully protect his and their work and materials against damage or injury from the weather. If, in the opinion of the project manager, any work or materials shall have been damaged or injured by reason of failure on the part of the contractor or any of his subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the contractor.

17.21 PROTECTION OF WORK AND PROPERTY - EMERGENCY:

The contractor shall, at all times, protect the owner's property from injury or loss in connection with this contract. He shall, at all times, safely guard and protect his own work, and that of adjacent property, from damage. The contractor shall replace or make good any such damage, loss or injury unless it was caused directly by errors contained in the contract or by the owner, or the owner's duly authorized representative.

In case of an emergency which threatens loss or injury of property and/or safety of life, the contractor will be allowed to act, without previous instructions from the project manager immediately thereafter. Any claim for compensation by the contractor due to such extra work shall be promptly submitted to the project manager for approval.

Where the contractor has not taken action but has notified the project manager of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the project manager.

The amount of reimbursement paid to the contractor on account of any emergency action shall be determined by the project manager and owner based on their review of submitted documentation of actual costs incurred by the contractor.

17.22 EXTRAS:

Without invalidating the contract, the project manager may order extra work of the kind bid upon or make changes by altering, adding to or deducting from the work. The contract sum will be adjusted accordingly, and the consent of the surety will be obtained as required. All of the work of the kind bid upon shall be paid for at the prices stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the project manager and the cost therefore is stated in the order.

17.23 ANTI-LOBBYING:

- A. No Federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with 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 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, it will complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions; and
- C. It will require that the language of paragraph (n) of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

17.24 QUANTITIES OF ESTIMATE:

Wherever the quantities of work to be done and materials to be furnished on a unit basis under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids. The owner reserves the right to increase or decrease the units as may be deemed reasonably necessary or desirable to complete the work in this contract. Any such increase/decrease shall in no way invalidate this contract, nor shall any such increase/decrease give cause for claims or liability for damages.

17.25 ASSIGNMENTS:

The contractor shall not assign the whole or any part of this contract or any monies due or to become due hereunder without the express, written consent of the owner. In case the contractor assigns all or any part of any monies due or to become due under this contract, the instruments of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

17.26 GENERAL GUARANTY:

Neither the final payment nor partial or entire occupancy of the premises constitute an acceptance of any work not done in accordance with the contract documents; nor does either condition relieve the contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The owner will give notice of observed defects with reasonable promptness.

17.27 OSHA

Any contract awarded on or after July 1, 2009 requires any mechanic, laborer, or worker who performs work in a classification listed on the prevailing wage rate schedule on any public works project is required to complete a ten (10) hour federal OSHA safety and health course and provide proof of completion.

17.28 EQUAL EMPLOYMENT OPPORTUNITY:

- A. 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, mental retardation 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. 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 with out regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, 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;
- B. 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;
- C. The contractor agrees to provide each labor union or representative of workers with 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 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;
- D. The contractor agrees to comply with each provision of Conn. Gen. Stat. §§ 4a-60, 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to Conn. Gen. Stat. §§ 46a-56, as amended by Section 5 of Public Act 89-253, 46a-68e;
- E. 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 section 46a-56. If the contract is a public work contract, the contractor agrees and warrants that he will make good faith efforts to employ minority and women business enterprises as subcontractors and suppliers of materials on such public works project.

Pursuant to the provisions of Conn. Stat. Sect. 4a-60a.

- A. 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 orientations, in any manner prohibited by the laws of the United States or of the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation;
- B. 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;
- C. The contractor agrees to comply with each provision of this section and sections 46a-68e and 46a-68f of the general statutes and with each regulation or relevant order issued by said Commission pursuant to section 46a-56, 46a-68e and 46a-68f of the general statutes;
- D. 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 section 46a-56 of the general statutes.

Executive Order 11246.30 Federal Regulations 12319 (1965) Equal Opportunity Clause.

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

- A. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertisement; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, and to make available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

- B. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- C. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contract Compliance Officer advising the said labor union or workers' representatives of the contractor's commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- D. The contractor will comply with all provisions of (Federal) Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the (United States) Secretary of Labor.
- E. The contractor will furnish all information and reports required by (Federal) Executive Order 11246 of September 24, 1965, and by the rules and regulations, and orders of the (United States) Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by HUD, by the State Department of Housing and by the (United States) Secretary of Labor, for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further (United States) Government contracts or federally assisted construction contracts procedures authorized in (Federal) Executive Order 11246 of September 24, 1965, or order of the (United States) Secretary of Labor, or as otherwise provided by law.
- G. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the (United States) Secretary of Labor issued pursuant to Section 204 of (Federal) Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as HUD shall direct as a means of enforcing such provisions, including sanctions for noncompliance: provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by HUD, the contractor may request the United States to enter into such litigation to protect the interest of the United States"

Exemptions from above Equal Employment Opportunity Clause (4)(CFR Chap. 60):

- A. Contracts and subcontracts of \$10,000 or less (other than Government bills of lading) are exempt. The amount of the contract, rather than the amount of the Federal financial assistance shall govern in determining the applicability of this exemption.
- B. Except in the case of subcontracts for the performance of construction work at the site of construction, the clause shall not be required to be inserted in subcontracts below the second tier.
- C. Contracts and subcontracts of \$100,000 or less for standard commercial supplies or raw materials are exempt.

The contractor shall not be nor enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

The contractor shall carry out sanctions and penalties for violation of these specifications and the Equal Employment Clause, including suspension, termination and cancellation of existing subcontracts, as imposed or ordered by the Office of Federal Contract Compliance in accordance with Executive Order 11246. 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 the sub-paragraphs above, so as to achieve maximum results from its employees 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 in order to ensure that the company EEO policy is being carried out. The designated official must keep records and submit reports relating to the provisions hereof as required by the Municipality. Records shall 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 shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application or

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).

Executive Order Number 3.

This contract is subject to the provisions of Executive Order No. 3 of Governor Thomas J. Meskill promulgated June 16, 1971, and, as such, this contract may be canceled, terminated, or suspended by the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Three, or any State or Federal law concerning nondiscrimination, notwithstanding that the Labor Commissioner is not a party to this contract. The parties to this contract, as part of the consideration hereof, agree that said Executive Order No. Three is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the State Labor Commissioner shall have continuing jurisdiction in respect to contract performance in regard to nondiscrimination, until the contract is completed or terminated prior to completion.

Executive Order Number 17.

This contract is subject to the provision of Executive Order No. 17 of Governor Thomas J. Meskill, promulgated February 15, 1973, and, as such, this contract may be canceled, terminated, or suspended by the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Seventeen, notwithstanding that the Labor Commissioner may not be a party to this contract. The parties to this contract, as part of the consideration hereof, agree that Executive Order No. Seventeen is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the State Labor Commissioner shall have continuing jurisdiction in respect to listing all employment openings with the Connecticut State Employment Service.

Certification of Nonsegregated Facilities as required by 41CFR 60-1.8, must be submitted prior to the award of federally assisted construction contracts exceeding \$10,000 which are not exempt from the provisions of the Equal Employment Clause.

Contractors receiving federally assisted construction contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Employment Clause shall be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Employment Clause:

- A. A certification of non-segregated facilities as required by the 32CFR 7439, May 19, 1967, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity Clause.

- B. Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Employment Opportunity Clause shall be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Employment Opportunity Clause.

TAB F

Special Provisions

SPECIAL PROVISIONS

DESCRIPTION:

These Special Provisions amend or supplement the Division II Construction Details (Technical Provisions) and Division III Materials Section in the State of Connecticut Department of Transportation (CTDOT) Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817, dated 2016 (including the latest Supplemental Specifications) which are incorporated herein and are referred to herein after as "Form 817". Only the Form 817 Division II Construction Details and Division III Materials Section are incorporated herein.

Copies of Form 817 may be purchased from:

CTDOT
DOT Print Shop
(860) 594-3086

GENERAL:

It is required that the prime contractor self-perform a minimum of 50% of the original total contract value.

Special Provision amendments or supplements that apply throughout Form 817 Division Details (Technical Provisions) are outlined below:

1. Replace the word "State" and the word "Department, wherever they appear, with the word "Town" throughout Form 817. Unless otherwise determined by the town, all references to the State and the Department of Transportation, including its officers and employees and its sub-agencies such as the Office of Environmental Planning, shall be considered as references to the town.

RELEVANT SECTIONS:

The following is a partial list of relevant sections of Form 817 that apply to this project. This list is provided as reference only, meaning that it does not exclusively limit the scope of work for this project.

Section	Description
2.01	Clearing and Grubbing
2.02	Roadway Excavation, Formation of Embankment and Dispose of Surplus Material
2.09	Subgrade
2.12	Subbase
2.19	Sedimentation Control System
3.04	Processed Aggregate Base
4.06	Bituminous Concrete
8.11	Concrete Curbing
8.15	Bituminous Concrete Curbing
9.21	Concrete Sidewalks and Ramps
9.22	Bituminous Concrete Sidewalk, Bituminous Concrete Driveway
9.39	Sweeping for Dust Control

- 9.44 Topsoil
- 9.50 Turf Establishment, Erosion Control Matting
- 9.70 Trafficperson
- 9.71 Maintenance and Protection of Traffic
- 9.75 Mobilization and Project Closeout
- 9.77 Traffic Cone
- 9.78 Traffic Drum
- 9.80 Construction Staking
- 12.08 Sign Face – Sheet Aluminum
- 12.10 Epoxy Pavement Markings
- 12.20 Construction Signs – Type III Reflective Sheeting

SUBMITTALS:

The Contractor shall submit (3) copies of each shop drawing/product data to the Town or it's agent for approval, prior to construction. The Town or its agent will endeavor to respond with their approval and/or review comments within a (2) week period of their receipt of said submittals. See the Schedule of Materials Testing on page SP-5 for additional testing requirements. At a minimum, the Contractor shall make submittals on the following items that specifically pertain to the work of this project:

- Subbase
- Bituminous Concrete Mix Designs
- Precast Concrete Segmental Retaining Wall
- Concrete Mix Design (if applicable)
- Temporary Detection
- Rectangular Rapid Flashing Beacon (RRFB)
- Temporary Signalization

COORDINATION OF WORK:

The Contractor shall coordinate with the Town and its agents accordingly.

SCHEDULE:

The contract time for this project is ninety-five (95) consecutive calendar days, starting on the Notice to Proceed date, and does not allow for a winter shutdown period. The anticipated project schedule is as follows:

Bid Closed:	03/04/20
Notice of Award:	04/06/20
Contract Signing/Pre-Construction Meeting:	04/16/20
Notice to Proceed (NTP):	05/18/20
Anticipated Construction Start:	06/15/20
End of Contract Days	08/21/20

The schedule shown above includes a Notice to Proceed date approximately 26 days before the permissible active construction date to allow for submittals, shop drawings, mobilization etc. in advance of the active construction. Construction shall not begin prior to the end of public school in the Town

of Colchester (approximately June 12, 2020) and the construction shall be complete prior to the start of school in August (approximately August 26, 2020).

LIQUIDATED DAMAGES:

The Contractor is hereby notified that liquidated damages in the amount of seven hundred and fifty dollars (\$750.00) per consecutive calendar day apply to this project in order to help ensure a timely completion.

PREVAILING WAGE RATES:

Respondants shall comply with State Statutes concerning Employment and Labor Practices, as applicable, and Section 31-53 of the Connecticut General Statutes, as amended (Prevailing Wages). Wage Rate Determination for this project from the State of Connecticut is included in the Bid Documents.

PORTABLE CHEMICAL TOILET FACILITY:

The Contractor shall furnish one (1) portable chemical toilet at each active project location for the entire duration of the contract time period to support this construction project. There shall be no separate measurement and payment for this portable chemical toilet.

PERMITS:

The Town of Colchester has secured the local Conservation Commission permit and Planning and Zoning Commission Decision for the project. Also, the majority of the work is inside the Town owned right-of way. Approval for work outside of the ROW for two properties, as shown by the slope limits on the plans, has been obtained by the Town. Copies of the permits and property owner permissions are included in the Appendix (Tab K). It is the responsibility of the contractor to obtain all other required permits including a CT DOT Encroachment Permit for work within the State ROWs. The Town has received approval of the design to expedite the permit process for the Contractor.

CALL-BEFORE- YOU- DIG (CBYD):

The Contractor is hereby notified that he shall contact Call-Before-You-Dig (CBYD) 1-800-922-4455 www.cbyd.com and obtain authorization prior to start of work as required by law.

MAINTENANCE & PROTECTION OF TRAFFIC:

The Contractor is hereby notified that they will be required to maintain and protect traffic throughout the work area during construction in accordance with the Prosecution and Progress and the Maintenance and Protection of Traffic Special Provision 0971001A.

INSPECTION:

The Contractor is hereby notified that the Town or its agent shall perform any testing as deemed necessary to ensure contract compliance. See the attached Schedule of Minimum Testing on the next page.

Schedule of Minimum Testing
Local Transportation Capital Improvement Program

8/1/2013

Material Name	Unit	Test/Documentation	Frequency 1 per	Notes
Anchor Bolts	ea.	MC	project	1 per size
Asphalt Emulsions (CSS-1, RS-1 or SS-1)	gal	MC	10k	
Bituminous Concrete (HMA)	ton	D 2950 FLDT	day	See Note 3
Cement - Portland Type I/II	bag	FLDT	project	empty bag
Chemical Anchor	lb.	QPL MC	project	
Concrete-Ready Mixed	c.y.	T22 FLDL	75	4 cyl
Construction Signing	ea.	MC	project	
Geotextile	s.y.	QPL MC	project	
Gravel (Bank Run or Crushed)	c.y.	T27 LABT	5k	
Grout, Non-shrink	bag	MC	project	
Masonry Brick & Block (Solid)	ea.	FLDT	project	See Note 1
Pipe - Reinforced Concrete	l.f.	PC-1	project	See Note 1
Pipe (Metal & Plastic) All types	lf	MC	project	See Note 1
Pipe Arch - Aluminum	lf	MC	project	See Note 1
Precast Concrete Items (not pipe)	ea.	PC-1	Item type	
Prestressed Concrete Members	ea.	LABT	1	See Note 2 & 3
Reclaimed Misc. Aggregate	c.y.	T27/Chem Analysis	2500	See Note 5
Reclaimed Waste	c.y.	T180 LABT	50k	See Note 5
Sand (Masonry /Trenching & Backfilling)	c.y.	T27 LABT	2500	
Sheet Piling	l.f.	MC	project	See Note 4
Sign Post	ea	MC	project	See Note 1
Span Pole - Steel or Wood	ea.	MC	project	See Note 3
Steel Reinforcing Bars (Plain or Epoxy)	lb.	T244 MC	200t	
Stone (Broken/Crushed)	c.y.	T27 LABT	20k	
Structural Steel	ew	Shop Drawings	project	See Note 2 & 3
Topsoil	c.y.	FLDT	project	See Note 1
Traffic Signal Equipment	ea.	MC	project	NA

Notes

1	Material should be inspected on the project site prior to use. determine conformance.
2	QC Inspection should be provided and documented during fabrication.
3	Contact the Department of Transportation Division of Materials Testing to determine vendor qualifications and QA inspection availability.
4	Documentation should be provided to determine conformance to Buy America requirements.
5	FORM MAT-212 should be completed and provided by the Contractor prior to use of material.

Test Method/Test Type

LABT	Laboratory Test
FLDT	Test performed in the field
QPL	ConnDOT Qualified Products List (http://www.ct.gov/dot/lib/dot/documents/dresearch/conndot_qpl.pdf)
PC-1	MAT-308 Required from producer with shipment
MC*	Materials Certificate

*Should comply with ConnDOT Standard Specification Section 1.06.07

LIST OF SPECIAL PROVISIONS

NOTICE TO CONTRACTOR – PROSECUTION AND PROGRESS

SECTION 2.86 – DRAINAGE TRENCH EXCAVATION, ROCK IN DRAINAGE TRENCH EXCAVATION

SECTION 4.06 – BITUMINOUS CONCRETE

SECTION 5.86 – CATCH BASINS, MANHOLES AND DROP INLETS

SECTION M.04 – BITUMINOUS CONCRETE MATERIALS

SECTION M.06 – METALS

ITEM #0201000A – CLEARING AND GRUBBING

ITEM #0406275A – FINE MILLING OF BITUMINOUS CONCRETE (0 TO 4 INCHES)

ITEM #0506016A – PRECAST CONCRETE SEGMENTAL RETAINING WALL

ITEM #0586001.10A – TYPE “C” CATCH BASIN 0-10’ DEEP

ITEM #0586750A – TYPE “C” CATCH BASIN TOP

ITEM #0586760A – TYPE “C-L” CATCH BASIN TOP

ITEM #0586790.10A – REMOVE DRAINAGE STRUCTURE – 0’-10’ DEEP

ITEM #0921001A – CONCRETE SIDEWALKS & RAMPS

ITEM #0950020A – SITE RESTORATION AND SEEDING

ITEM #0971001A – MAINTENANCE AND PROTECTION OF TRAFFIC

ITEM #1111201A – TEMPORARY DETECTION (SITE NO. 1)

ITEM #1111401A – LOOP VEHICLE DETECTOR

ITEM #1111451A – LOOP DETECTOR SAWCUT

ITEM #1117111A – RECTANGULAR RAPID FLASHING BEACON (RRFB) – TYPE B

ITEM #1118051A – TEMPORARY SIGNALIZATION (SITE NO. 1)

ITEM #1206023A – REMOVAL AND RELOCATION OF EXISTING SIGNS

ITEM #1208932A – SIGN FACE – SHEET ALUMINUM (TYPE IV RETROREFLECTIVE SHEETING)

ITEM #1303196A – RELOCATE FIRE HYDRANT

NOTICE TO CONTRACTOR - PROSECUTION AND PROGRESS

Prosecution of Work:

Prior to construction, particularly as will affect traffic operations, the Contractor shall submit, for the review and approval of the Engineer, a detailed Progress Schedule. It shall show all fundamental work items and operations as a function of estimated time periods. This submittal shall also include a listing of shop drawings (if applicable) and other required submittals keyed to the Progress Schedule activities. It shall reflect realistic processing, delivery and construction periods.

The Progress Schedule shall provide ample space for plotting of actual related progress. It shall be updated by the Contractor on a biweekly basis throughout the full period of the project.

Limitation of Operations:

Halls Hill Road at the project site shall remain open to vehicular and pedestrian traffic for the duration of construction. **Since town schools are located on the street, the timeframe for construction will be limited to the time that school is not in session during July and August.** The Contractor shall schedule his construction operations so as to cause minimal inconvenience to adjoining property owners.

In order to provide for traffic operations as outlined in the special provisions "Maintenance and Protection of Traffic," the Contractor shall progress his construction activities as outlined herein or as shown on the plans for Maintenance and Protection of Traffic. Any revisions shall require the written approval of the Town.

The Contractor's allowable work hours at the site are limited to the following:

Halls Hill Road

Monday through Friday between 7:30 a.m. and 6:00 p.m.;

Saturday and Sunday – only with prior Town approval for certain activities;

All temporary concrete barriers, other protective systems and traffic control devices as called for by the contract or ordered by the Engineer must be on hand and available in sufficient quantity for immediate installation prior to any stage change. Temporary concrete barrier may be salvaged, but must meet all applicable specifications for its item.

All temporary concrete barriers, other protective systems and traffic control devices shall be maintained in a "like new" condition, otherwise they must be replaced.

SECTION 2.86 - DRAINAGE TRENCH EXCAVATION, ROCK IN DRAINAGE TRENCH EXCAVATION

2.86.01—Description

2.86.03—Construction Methods

2.86.04—Method of Measurement

2.86.05—Basis of Payment

2.86.01—Description: Drainage trench excavation consists of the excavation necessary for the proper installation of drainage structures, pipes, pipe ends and any other incidental drainage items.

It shall include earth and rock excavation, removal of existing pipes, dewatering, backfill, and disposal of materials; to the trench limits described herein, to the dimensions shown on the plans, or as directed by the Engineer.

Classifications:

- (1) **Drainage Trench Excavation** will include only the excavation necessary for the construction of the drainage items and the removals specified above.
- (2) **Rock in Drainage Trench Excavation**, insofar as it applies to drainage trench excavation, shall be defined as **1/2 cubic yard or more** in volume of the following obstructions removed from the limits of the drainage trench:
 - (a) rock in definite ledge formation
 - (b) boulders, or portions of boulders
 - (c) cement masonry structures
 - (d) concrete or reinforced concrete structures
 - (e) reinforced concrete pipe
 - (f) subsurface concrete pavement or concrete base

The removal shall be as indicated or directed from within the limits defined in 2.86.03 for drainage trench excavation.

2.86.03—Construction Methods:

(1) Drainage Trench Excavation Limits:

Horizontal Limits: Trench widths for pipes, pipe ends, pipe-arches, and drainage structures shall be as follows:

- (a) 2 feet greater than the nominal inside diameter of circular pipe or nominal inside span of elliptical pipe or pipe-arch for such diameters or spans of less than 30 inches
- (b) 3 feet greater than the nominal inside diameter of circular pipe or the nominal inside span of elliptical pipe or pipe-arch for such diameters or spans that are 30 inches or greater
- (c) 4 feet greater than the nominal inside diameter or nominal horizontal inside span for pipe-arches fabricated from structural plates
- (d) 2 feet beyond the neat lines of all exterior or foundation walls of drainage structures

Vertical Limits: Trench depths shall extend vertically as follows:

- (a) From the bottom of the trench to the bottom of the roadway excavation, or in areas away from roadway excavation, to the top of existing ground surface.

(b) Where drainage pipe is to be laid in a fill area, the embankment shall be placed and compacted to a minimum elevation 12 inches above the top of the proposed pipe, whereupon the drainage trench excavation shall be performed and the pipe installed.

- (2) **Drainage Trench Excavation:** Drainage trench excavation shall be made in conformity with the requirements of the plans, or as directed by the Engineer. The Contractor shall furnish and employ such shores, braces, pumps, or ancillary equipment as needed for the proper protection of property, proper completion of the work, as well as safety of the public and employees of both the Contractor and the Department. All bracing and shoring shall be removed when no longer required for the construction or safety of the work. When required, the Contractor shall provide or have on the Site at all times any OSHA certification for equipment to be used, per 1.07.07. For support of trenches greater than 10 feet in depth, working drawings shall be submitted, in accordance with 1.05.02. The Contractor shall control erosion and sedimentation at trench locations and ensure that pumped water from the drainage excavation is discharged in accordance with the requirements of 1.10.

Where a firm foundation is not encountered at the grades established due to unsuitable material, such as soft, spongy, or unstable soil, the unsuitable material shall be removed and replaced with approved backfill, thoroughly compacted in lifts not to exceed 6 inches, for the full trench width. The Engineer shall be notified prior to removal of the unsuitable material in order to determine the depth of removal necessary.

After the excavation is complete, the Contractor shall notify the Engineer and no drainage structure or material shall be placed in the excavated area until the Engineer has approved the depth of excavation and the character of the foundation material.

- (3) **Rock in Drainage Trench Excavation:**

(a) Rock in Drainage Trench Excavation - Ledge: When rock in definite ledge form is encountered, the Contractor shall excavate a minimum of 12 inches below the bottom of the proposed pipe or drainage structure; and this depth shall be filled with bedding material (as specified in M.08.03-1) below the proposed pipe; or granular fill (as specified in M.02.01) below the proposed drainage structure, which shall be thoroughly compacted in lifts not to exceed 6 inches.

(b) Rock in Drainage Trench Excavation - Boulders: When boulders are encountered, the Contractor shall remove them from the trench and if backfill is required, the void shall be filled with bedding material, surplus excavated material (as specified in 2.02.03-8) or granular fill which shall be thoroughly compacted in lifts not to exceed 6 inches.

(c) Rock in Drainage Trench Excavation –Structures: When cement masonry, concrete or reinforced concrete structures are encountered within the drainage trench limits, the Contractor shall remove the structure in its entirety or as directed by the Engineer, and if backfill is required, the void shall be filled with bedding material, surplus excavated material or granular fill which shall be thoroughly compacted in lifts not to exceed 6 inches.

- (4) **Backfill:** Suitable material excavated from the drainage trench shall be used as backfill material prior to consideration of using any other source of backfill. Backfill material used shall be of a quality satisfactory to the Engineer and shall be free from large or frozen lumps, wood and other extraneous material. Rock fill or stones larger than 5 inches shall not be placed within 1 foot of the drainage structure or pipe. The grading shall be

completed to the lines shown on the plans, or as ordered, by refilling to the required elevation with approved material, placed in layers not to exceed 6 inches in depth after compaction, which shall be thoroughly compacted with equipment approved by the Engineer.

All surplus or unsuitable material shall be removed and disposed of as directed. Should additional material be required for backfilling, it may be obtained from the Project surplus excavation in accordance with 2.02.03-8 or from borrow pits, gravel pits, or elsewhere as directed by the Engineer.

2.86.04—Method of Measurement:

Drainage Trench Excavation: Drainage trench excavation will not be measured for payment.

If granular fill or borrow is required to replace unsuitable material it will be measured for payment as directed by the Engineer.

Rock in Drainage Trench Excavation: If any material meeting the definition of Rock in Drainage Trench Excavation is encountered, the Contractor shall strip it of sufficient overlying material to allow for proper measurement and shall then notify the Engineer that the rock surface is ready for measurement. If the Contractor fails to give such notice, the Engineer will presume that the measurements taken at the time the Engineer first saw the material in question will give the true quantity of excavation.

Rock in Drainage Trench Excavation will be measured according to the classification provided in 2.86.01 and within the drainage trench excavation limits provided in 2.86.03.

For the removal of underground obstructions, as classified in 2.86.01-2, the measurement shall be the actual volume of rock removed (1/2 cubic yard or more) as approved by the Engineer.

Rock in Drainage Trench Excavation will not be measured for payment in fills.

Bedding Material or other suitable fill, as specified in 2.86.03(3), used to fill voids after rock is excavated will not be measured for payment.

2.86.05—Basis of Payment:

Drainage Trench Excavation: There will be no direct payment for drainage trench excavation required for the installation of drainage pipes, pipe ends, catch basins, drop inlets, manholes, and other drainage structures, or any other incidental drainage work including materials, tools, equipment and labor necessary to complete the drainage trench excavation in conformity with the plans or as directed by the Engineer.

There will be no direct payment for backfill or disposal of surplus material necessary for the satisfactory completion of this work.

There will be no direct payment made for shoring, bracing, dewatering, or for material or equipment necessary for the satisfactory completion of the work.

Where called for on the plans to install temporary earth retaining systems for the support of existing facilities, pavement, utilities, or for other constraints, payment will be made in accordance with such items in the Contract.

If granular fill or borrow is used to replace unsuitable material, payment will be made at the respective Contract unit prices, or in the absence of such items in the Contract, as Extra Work in accordance with 1.04.05.

Rock in Drainage Trench Excavation: When rock, conforming to the description in 2.86.01 is encountered within the limits of drainage trench excavation, its removal will be classified and

paid for at the Contract unit price per cubic yard for "Rock in Drainage Trench Excavation 0' – 10' Deep," or "Rock in Drainage Trench Excavation 0' – 20' Deep," as the case may be.

Those portions of drainage trench excavation classified and paid for as "Rock in Drainage Trench Excavation" of the various depths will be the actual volumes of rock excavated within the limits for drainage trench excavation, at the applicable bottom depth price.

Where no item or items for "Rock in Drainage Trench Excavation" at the applicable depth appear in the proposal and rock is encountered in drainage trench excavation, its removal will be paid for as Extra Work in accordance with 1.04.05.

When excavation is necessary in fill, no such excavation will be paid for as "Rock in Drainage Trench Excavation."

When excavation is necessary for any purpose other than drainage-related items, no such excavation will be paid under this item.

Bedding material or any other suitable material used to fill voids vacated by excavated rock will not be paid for but shall be included in the unit price per cubic yard for "Rock in Drainage Trench Excavation."

Pay Item	Pay Unit
Rock in Drainage Trench Excavation 0' - 10' Deep	c.y.
Rock in Drainage Trench Excavation 0' - 20' Deep	c.y.

SECTION 4.06 - BITUMINOUS CONCRETE

Section 4.06 is being deleted in its entirety and replaced with the following:

4.06.01—Description

4.06.02—Materials

4.06.03—Construction Methods

- 1. Material Documentation**
- 2. Transportation of Mixture**
- 3. Paving Equipment**
- 4. Test Section**
- 5. Transitions for Roadway Surface**
- 6. Spreading and Finishing of Mixture**
- 7. Longitudinal Joint Construction Methods**
- 8. Contractor Quality Control (QC) Requirements**
- 9. Temperature and Seasonal Requirements**
- 10. Field Density**
- 11. Acceptance Sampling and Testing**
- 12. Density Dispute Resolution Process**
- 13. Corrective Work Procedure**
- 14. Protection of the Work**
- 15. Cut Bituminous Concrete Pavement**

4.06.04—Method of Measurement

4.06.05—Basis of Payment

4.06.01—Description: Work under this Section shall include the production, delivery, placement and compaction of a uniform textured, non-segregated, smooth bituminous concrete pavement to the grade and cross section shown on the plans.

The following terms as used in this specification are defined as:

Bituminous Concrete: A composite material consisting of prescribed amounts of asphalt binder and aggregates. Asphalt binder may also contain additives engineered to modify specific properties and/or behavior of the composite material. References to bituminous concrete apply to all of its forms, such as those identified as hot-mix asphalt (HMA) or polymer-modified asphalt (PMA).

Bituminous Concrete Plant (Plant): A structure where aggregates and asphalt binder are combined in a controlled fashion into a bituminous concrete mixture suitable for forming pavements and other paved surfaces.

Course: A continuous layer (a lift or multiple lifts) of the same bituminous concrete mixture placed as part of the pavement structure.

Density Lot: The total tonnage of all bituminous concrete placed in a single lift which are:

PWL density lots = When the project total estimated quantity per mixture is larger than 3,500 tons

Simple Average density lots = When the project total estimated quantity per mixture is 3,500 tons or less

Disintegration: Erosion or fragmentation of the pavement surface which can be described as

polishing, weathering-oxidizing, scaling, spalling, raveling, or formation of potholes.

Dispute Resolution: A procedure used to resolve conflicts between the Engineer and the Contractor's results that may affect payment.

Hot Mix Asphalt (HMA): A bituminous concrete mixture typically produced at 325°F.

Job Mix Formula (JMF): A recommended aggregate gradation and asphalt binder content to achieve the required mixture properties.

Lift: An application of a bituminous concrete mixture placed and compacted to a specified thickness in a single paver pass.

Percent Within Limits (PWL): The percentage of the lot falling between the Upper Specification Limit (USL) and the Lower Specification Limit (LSL).

Polymer Modified Asphalt (PMA): A bituminous concrete mixture containing a polymer-modified asphalt binder and using a qualified warm mix technology.

Production Lot: The total tonnage of a bituminous concrete mixture from a single source that may receive an adjustment.

Production Sub Lot: Portion of the production lot typically represented by a single sample.

Quality Assurance (QA): All those planned and systematic actions necessary to provide CTDOT the confidence that a Contractor will perform the work as specified in the Contract.

Quality Control (QC): The sum total of activities performed by the vendor (Producer, Manufacturer, and Contractor) to ensure that a product meets contract specification requirements.

Superpave: A bituminous concrete mix design used in mixtures designated as "S*" Where "S" indicates Superpave and * indicates the sieve related to the nominal maximum aggregate size of the mix.

Segregation: A non-uniform distribution of a bituminous concrete mixture in terms of gradation, temperature, or volumetric properties.

Warm Mix Asphalt (WMA) Technology: A qualified additive or technology that may be used to produce a bituminous concrete at reduced temperatures and/or increase workability of the mixture.

4.06.02—Materials: All materials shall meet the requirements of Section M.04.

1. Materials Supply: The bituminous concrete mixture must be from one source of supply and originate from one Plant unless authorized by the Engineer.

2. Recycled Materials: Reclaimed Asphalt Pavement (RAP), Crushed Recycled Container Glass (CRCG), Recycled Asphalt Shingles (RAS), or crumb rubber (CR) from recycled tires may be incorporated in bituminous concrete mixtures in accordance with Project Specifications.

4.06.03—Construction Methods

1. Material Documentation: All vendors producing bituminous concrete must have Plants with automated vehicle-weighting scales, storage scales, and material feeds capable of producing a delivery ticket containing the information below.

- a. State of Connecticut printed on ticket.
- b. Name of Producer, identification of Plant, and specific storage silo if used.
- c. Date and time.
- d. Mixture Designation, mix type and level. Curb mixtures for machine-placed curbing must state "curb mix only."

- e. If WMA Technology is used, “-W” must be listed following the mixture designation.
- f. Net weight of mixture loaded into the vehicle. (When RAP and/or RAS is used, the moisture content shall be excluded from mixture net weight.)
- g. Gross weight (equal to the net weight plus the tare weight or the loaded scale weight).
- h. Tare weight of vehicle (daily scale weight of the empty vehicle).
- i. Project number, purchase order number, name of Contractor (if Contractor other than Producer).
- j. Vehicle number - unique means of identification of vehicle.
- k. For Batch Plants: individual aggregate, recycled materials, and virgin asphalt max/target/min weights when silos are not used.
- l. For every mixture designation: the running daily and project total delivered and sequential load number.

The net weight of mixture loaded into the vehicle must be equal to the cumulative measured weights of its components.

The Contractor must notify the Engineer immediately if, during production, there is a malfunction of the weight recording system in the automated Plant. Manually written tickets containing all required information will be allowed for no more than 1 hour.

The State reserves the right to have an Inspector present to monitor batching and/or weighing operations.

2. Transportation of Mixture: The mixture shall be transported in vehicles that are clean of all foreign material, excessive coating or cleaning agents, and that have no gaps through which material might spill. Any material spilled during the loading or transportation process shall be quantified by re-weighing the vehicle. The Contractor shall load vehicles uniformly so that segregation is minimized. Loaded vehicles shall be tightly covered with waterproof covers acceptable to the Engineer. Mesh covers are prohibited. The cover must minimize air infiltration. Vehicles found not to be in conformance shall not be loaded

Vehicles with loads of bituminous concrete being delivered to State projects must not exceed the statutory or permitted load limits referred to as gross vehicle weight (GVW). The Contractor shall furnish a list and allowable weights of all vehicles transporting mixture. The State reserves the right to check the gross and tare weight of any vehicle. If the gross or tare weight varies from that shown on the delivery ticket by more than 0.4%, the Engineer will recalculate the net weight. The Contractor shall correct the discrepancy to the satisfaction of the Engineer.

If a vehicle delivers mixture to the Project and the delivery ticket indicates that the vehicle is overweight, the load may not be rejected but a “Measured Weight Adjustment” will be taken in accordance with Article 4.06.04.

Vehicle body coating and cleaning agents must not have a deleterious effect on the mixture. The use of solvents or fuel oil, in any concentration, is prohibited for the coating of vehicle bodies.

For each delivery, the Engineer shall be provided a clear, legible copy of the delivery ticket.

3. Paving Equipment: The Contractor shall have the necessary paving and compaction equipment at the Project Site to perform the work. All equipment shall be in good working order and any equipment that is worn, defective, or inadequate for performance of the work shall be repaired or replaced by the Contractor to the satisfaction of the Engineer. During the paving operation, the use of solvents or fuel oil, in any concentration, is strictly prohibited as a release agent or cleaner on any paving equipment (i.e., rollers, pavers, transfer devices, etc.).

Refueling or cleaning of equipment is prohibited in any location on the Project where fuel or solvents might come in contact with paved areas or areas to be paved. Solvents used in cleaning mechanical equipment or hand tools shall be stored clear of areas paved or to be paved. Before any such equipment and tools are cleaned, they shall be moved off of areas paved or to be paved.

Pavers: Each paver shall have a receiving hopper with sufficient capacity to provide for a uniform spreading operation and a distribution system that places the mix uniformly, without segregation. The paver shall be equipped with and use a vibratory screed system with heaters or burners. The screed system shall be capable of producing a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. Pavers with extendible screed units as part of the system shall have auger extensions and tunnel extenders as necessary. Automatic screed controls for grade and slope shall be used at all times unless otherwise authorized by the Engineer. The controls shall automatically adjust the screed to compensate for irregularities in the preceding course or existing base. The controls shall maintain the proper transverse slope and be readily adjustable, and shall operate from a fixed or moving reference such as a grade wire or floating beam (minimum length 20 feet).

Rollers: All rollers shall be self-propelled and designed for compaction of bituminous concrete. Roller types shall include steel wheeled, pneumatic, or a combination thereof. Rollers that operate in a dynamic mode shall have drums that use a vibratory or oscillatory system or combination. Vibratory rollers shall be equipped with indicators for amplitude, frequency, and speed settings/readouts to measure the impacts per foot during the compaction process. Oscillatory rollers shall be equipped with frequency indicators. Rollers can operate in the dynamic mode using the oscillatory system on concrete structures such as bridges and catch basins if at the lowest frequency setting.

Pneumatic tire rollers shall be equipped with wide-tread compaction tires capable of exerting an average contact pressure from 60 to 90 psi uniformly over the surface. The Contractor shall furnish documentation to the Engineer regarding tire size, pressure and loading to confirm that the proper contact pressure is being developed and that the loading and contact pressure are uniform for all wheels.

Lighting: For paving operations which will be performed during hours of darkness the paving equipment shall be equipped with lighting fixtures as described below or with an approved equal. Lighting shall minimize glare to passing traffic. The lighting options and minimum number of fixtures are listed in Tables 4.06-1 and 4.06-2.

TABLE 4.06-1: Minimum Paver lighting

Option	Fixture Configuration	Fixture Quantity	Requirement
1	Type A	3	Mount over screed area
	Type B (narrow) or Type C (spot)	2	Aim to auger and guideline
	Type B (wide) or Type C (flood)	2	Aim 25 feet behind paving machine
2	Type D Balloon	2	Mount over screed area

TABLE 4.06-2: Minimum Roller Lighting

Option	Fixture Configuration	Fixture Quantity	Requirement
1	Type B (wide)	2	Aim 50 feet in front of and behind roller
	Type B (narrow)	2	Aim 100 feet in front of and behind roller
2	Type C (flood)	2	Aim 50 feet in front of and behind roller
	Type C (spot)	2	Aim 100 feet in front of and behind roller
3	Type D Balloon	1	Mount above the roller

*All fixtures shall be mounted above the roller.

Type A: Fluorescent fixture shall be heavy duty industrial type. Each fixture shall have a minimum output of 8,000 lumens. The fixtures shall be mounted horizontally and be designed for continuous row installation.

Type B: Each floodlight fixture shall have a minimum output of 18,000 lumens.

Type C: Each fixture shall have a minimum output of 19,000 lumens.

Type D: Balloon light – each balloon light fixture shall have minimum output of 50,000 lumens and emit light equally in all directions.

Material Transfer Vehicle (MTV): A MTV shall be used when placing bituminous concrete surface course (a lift or multiple lifts) as indicated in the Contract except as noted on the plans or as directed by the Engineer. In addition, continuous paving lengths of less than 500 feet may not require the use of a MTV as determined by the Engineer.

The MTV must be a vehicle specifically designed for the purpose of delivering the bituminous concrete mixture from the delivery vehicle to the paver. The MTV must continuously remix the bituminous concrete mixture throughout the placement process.

The use of a MTV will be subject to the requirements stated in Article 1.07.05 Load Restrictions. The Engineer may limit the use of the vehicle if it is determined that the use of the MTV may damage highway components, utilities, or bridges. The Contractor shall submit to the Engineer at time of pre-construction the following information:

1. The make and model of the MTV.
2. The individual axle weights and axle spacing for each piece of paving equipment (haul vehicle, MTV and paver).
3. A working drawing showing the axle spacing in combination with all pieces of equipment that will comprise the paving echelon.

4. Test Section: The Engineer may require the Contractor to place a test section whenever the requirements of this specification or Section M.04 are not met.

The Contractor shall submit the quantity of mixture to be placed and the location of the test section for review and approval by the Engineer. The same equipment used in the construction of a passing test section shall be used throughout production.

If a test section fails to meet specifications, the Contractor shall stop production, make necessary adjustments to the job mix formula, Plant operations, or procedures for placement and compaction. The Contractor shall construct test sections, as allowed by the Engineer, until all the required specifications are met. All test sections shall also be subject to removal as set forth in Article 1.06.04.

5. Transitions for Roadway Surface: Transitions shall be formed at any point on the roadway where the pavement surface deviates, vertically, from the uniform longitudinal profile as specified on the plans. Whether formed by milling or by bituminous concrete mixture, all transition lengths shall meet the criteria below unless otherwise specified.

Permanent Transitions: Defined as any gradual change in pavement elevation that remains as a permanent part of the work.

A transition shall be constructed no closer than 75 feet from either side of a bridge expansion joint or parapet. All permanent transitions, leading and trailing ends shall meet the following length requirements:

Posted Speed Limit	Permanent Transition Length Required
> 35 mph	30 feet per inch of elevation change
35 mph or less	15 feet per inch of elevation change

In areas where it is impractical to use the above-described permanent transition lengths, the use of a shorter permanent transition length may be permitted when approved by the Engineer.

Temporary Transitions: Defined as a transition that does not remain a permanent part of the work.

All temporary transitions shall meet the following length requirements:

Posted Speed Limit	Temporary Transition Length Required
> 50 mph	Leading Transition: 15 feet per inch of vertical change (thickness) Trailing Transition: 6 feet per inch of vertical change (thickness)
40, 45 or 50 mph	Leading and Trailing: 4 feet per inch of vertical change (thickness)
35 mph or less	Leading and Trailing: 3 feet per inch of vertical change (thickness)

Note: Any temporary transition to be in place over the winter shutdown period or during extended periods of inactivity (more than 14 calendar days) shall meet the greater than 50 mph requirements shown above.

6. Spreading and Finishing of Mixture: Prior to the placement of the mixture, the underlying base course shall be brought to the plan grade and cross section within the allowable tolerance.

Immediately before placing a bituminous concrete lift, a uniform coating of tack coat shall be applied to all existing underlying pavement surfaces and on the exposed surface of a wedge joint. Such surfaces shall be clean and dry. Sweeping or other means acceptable to the Engineer shall be used.

The mixture shall not be placed whenever the surface is wet or frozen.

Tack Coat Application: The tack coat shall be applied by a pressurized spray system that results in uniform overlapping coverage at an application rate of 0.03 to 0.05 gal./s.y. for a non-milled surface and an application rate of 0.05 to 0.07 gal./s.y. for a milled surface. For areas

where both milled and un-milled surfaces occur, the tack coat shall be an application rate of 0.03 to 0.05 gal /s.y. The Engineer must approve the equipment and the method of measurement prior to use. The material for tack coat shall be heated to $160^{\circ}\text{F} \pm 10^{\circ}\text{F}$ and shall not be further diluted.

Tack coat shall be allowed sufficient time to break prior to any paving equipment or haul vehicles driving on it.

The Contractor may request to omit the tack coat application between bituminous concrete layers that have not been exposed to traffic and are placed during the same work shift. Requests to omit tack coat application on the upper and lower surfaces of a wedge joint will not be considered.

Placement: The mixture shall be placed and compacted to provide a smooth, dense surface with a uniform texture and no segregation at the specified thickness and dimensions indicated in the plans and specifications.

When unforeseen weather conditions prevent further placement of the mixture, the Engineer is not obligated to accept or place the bituminous concrete mixture that is in transit from the Plant.

In advance of paving, traffic control requirements shall be set up, maintained throughout placement, and shall not be removed until all associated work including density testing is completed.

The mixture temperature will be verified by means of a probe or infrared type of thermometer. The placement temperature range shall be listed in the quality control plan (QCP) for placement and meet the requirements of Table M.04.03-4. Any HMA material that falls outside the specified temperature range as measured by a probe thermometer may be rejected.

The Contractor shall inspect the newly placed pavement for defects in mixture or placement before rolling is started. Any deviation from standard crown or section shall be immediately remedied by placing additional mixture or removing surplus mixture. Such defects shall be corrected to the satisfaction of the Engineer.

Where it is impracticable due to physical limitations to operate the paving equipment, the Engineer may permit the use of other methods or equipment. Where hand spreading is permitted, the mixture shall be placed by means of suitable shovels and other tools, and in a uniformly loose layer at a thickness that will result in a completed pavement meeting the designed grade and elevation.

Placement Tolerances: Each lift of bituminous concrete placed at a specified thickness shall meet the following requirements for thickness and area. Any pavement exceeding these limits shall be subject to an adjustment or removal. Lift tolerances will not relieve the Contractor from meeting the final designed grade. Lifts of specified non-uniform thickness, i.e. wedge or shim course, shall not be subject to thickness and area adjustments.

- a) Thickness: Where the average thickness of the lift exceeds that shown on the plans beyond the tolerances shown in Table 4.06-3, the Engineer will calculate the thickness adjustment in accordance with Article 4.06.04.

TABLE 4.06-3: Thickness Tolerances

Mixture Designation	Lift Tolerance
S1	+/- 3/8 inch
S0.25, S0.375, S0.5	+/- 1/4 inch

Where the thickness of the lift of mixture is less than that shown on the plans beyond the

tolerances shown in Table 4.06-3, the Contractor, with the approval of the Engineer, shall take corrective action in accordance with this Section.

- b) Area: Where the width of the lift exceeds that shown on the plans by more than the specified thickness, the Engineer will calculate the area adjustment in Article 4.06.04.
- c) Delivered Weight of Mixture: When the delivery ticket shows that the truck exceeds the allowable gross weight for the vehicle type, the Engineer will calculate the weight adjustment in accordance with Article 4.06.04.

Transverse Joints: All transverse joints shall be formed by saw-cutting to expose the full thickness of the lift. Tack coat shall be applied to the sawn face immediately prior to additional mixture being placed.

Compaction: The Contractor shall compact the mixture to meet the density requirements as stated in Article 4.06.04 and eliminate all roller marks without displacement, shoving cracking, or aggregate breakage.

When placing a lift with a specified thickness less than 1 1/2 inches, or a wedge course, the Contractor shall provide a minimum rolling pattern as determined by the development of a compaction curve. The procedure to be used shall be documented in the Contractor's QCP for placement and demonstrated on the first day of placement.

The use of the vibratory system on concrete structures is prohibited. When approved by the Engineer, the Contractor may operate a roller using an oscillatory system at the lowest frequency setting.

If the Engineer determines that the use of compaction equipment in the dynamic mode may damage highway components, utilities or adjacent property, the Contractor shall provide alternate compaction equipment.

Rollers operating in the dynamic mode shall be shut off when changing directions.

These allowances will not relieve the Contractor from meeting pavement compaction requirements.

Surface Requirements:

Each lift of the surface course shall not vary more than 1/4 inch from a Contractor-supplied 10 foot straightedge. For all other lifts of bituminous concrete, the tolerance shall be 3/8 inch. Such tolerance will apply to all paved areas.

Any surface that exceeds these tolerances shall be corrected by the Contractor at its own expense.

7. Longitudinal Joint Construction Methods: The Contractor shall use Method I - Notched Wedge Joint (see Figure 4.06-1) when constructing longitudinal joints where lift thicknesses are 1 1/2 inches to 3 inches. S1.0 mixtures shall be excluded from using Method I. Method II - Butt Joint (see Figure 4.06-2) shall be used for lifts less than 1 1/2 inches or greater than 3 inches. Each longitudinal joint shall maintain a consistent offset from the centerline of the roadway along its entire length. The difference in elevation between the two faces of any completed longitudinal joint shall not exceed 1/4 inch at any location.

Method I - Notched Wedge Joint:

A notched wedge joint shall be constructed as shown in Figure 4.06-1 using a device that is attached to the paver screed and is capable of independently adjusting the top and bottom vertical notches. The device shall have an integrated vibratory system. The top vertical notch must be located at the centerline or lane line in the final lift. The requirement for paving full width "curb to curb" as described in Method II may be waived if addressed in the QC plan and approved by

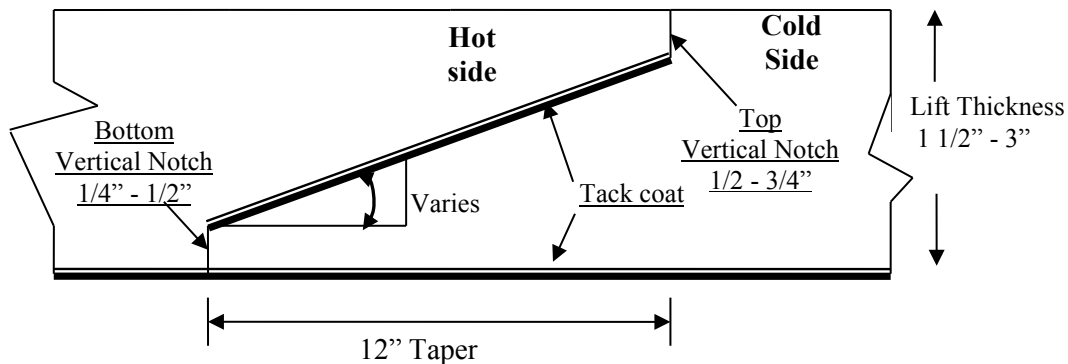
the Engineer.

The taper portion of the wedge joint shall be evenly compacted using equipment other than the paver or notch wedge joint device. The compaction device shall be the same width as the taper and not reduce the angle of the wedge or ravel the top notch of the joint during compaction.

When placed on paved surfaces, the area below the sloped section of the joint shall be treated with tack coat. The top surface of the sloped section of the joint shall be treated with tack coat prior to placing the completing pass.

The taper portion of the wedge joint shall not be exposed to traffic for more than 5 calendar days.

Figure 4.06-1: Notched Wedge Joint (Not to Scale)



Any exposed wedge joint must be located to allow for the free draining of water from the road surface.

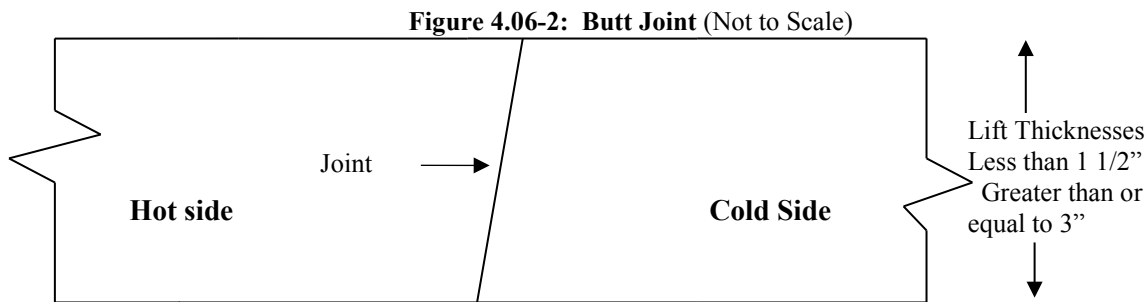
The Engineer reserves the right to define the paving limits when using a wedge joint that will be exposed to traffic.

If Method I cannot be used on those lifts which are 1 ½ inches to 3 inches, Method III may be substituted according to the requirements below for “Method III - Butt Joint with Hot Poured Rubberized Asphalt Treatment.”

Method II - Butt Joint:

When adjoining passes are placed, the Contractor shall use the end gate to create a near vertical edge (refer to Figure 4.06-2). The completing pass (hot side) shall have sufficient mixture so that the compacted thickness is not less than the previous pass (cold side). During placement of multiple lifts, the longitudinal joint shall be constructed in such a manner that it is located at least 6 inch from the joint in the lift immediately below. The joint in the final lift shall be at the centerline or at lane lines. The end gate on the paver should be set so there is an overlap onto the cold side of the joint.

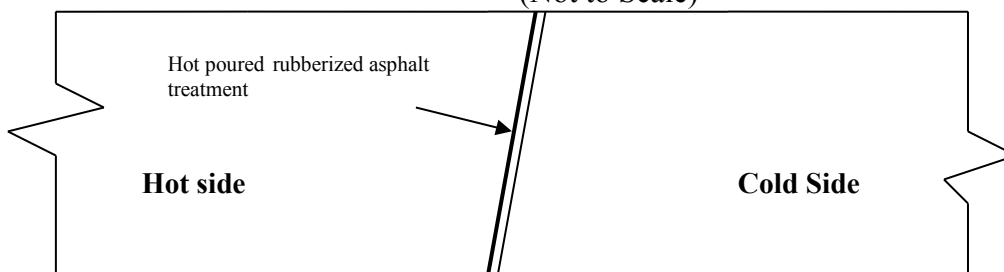
The Contractor shall not allow any butt joint to be incomplete at the end of a work shift unless otherwise allowed by the Engineer. When using this method, the Contractor is not allowed to leave a vertical edge exposed at the end of a work shift and must complete paving of the roadway full width “curb to curb.”



Method III - Butt Joint with Hot Poured Rubberized Asphalt Treatment:

If Method I cannot be used due to physical constraints in certain limited locations, the Contractor may submit a request in writing for approval by the Engineer to use Method III as a substitution in those locations. There shall be no additional measurement or payment made when Method III is substituted for Method I. When required by the Contract or approved by the Engineer, Method III (see Figure 4.06-3) shall be used.

Figure 4.06-3: Butt Joint with Hot Poured Rubberized Asphalt Treatment
(Not to Scale)



All of the requirements of Method II must be met with Method III. In addition, the longitudinal vertical edge must be treated with a rubberized joint seal material meeting the requirements of ASTM D6690, Type 2. The joint sealant shall be placed on the face of the “cold side” of the butt joint as shown above prior to placing the “hot side” of the butt joint. The joint seal material shall be applied in accordance with the manufacturer’s recommendation so as to provide a uniform coverage and avoid excess bleeding onto the newly placed pavement.

8. Contractor Quality Control (QC) Requirements: The Contractor shall be responsible for maintaining adequate quality control procedures throughout the production and placement operations. Therefore, the Contractor must ensure that the materials, mixture, and work provided by Subcontractors, Suppliers, and Producers also meet Contract specification requirements.

This effort must be documented in Quality Control Plans (QCP) and must address the actions, inspection, or sampling and testing necessary to keep the production and placement operations in control, to determine when an operation has gone out of control and to respond to correct the situation in a timely fashion.

The Standard QCP for production shall consist of the quality control program specific to the production facility.

There are 3 components to the QCP for placement: a Standard QCP, a Project Summary Sheet

that details Project-specific information, and, if applicable, a separate Extended Season Paving Plan as required in 4.06.03-9 “Temperature and Seasonal Requirements.”

The Standard QCP for both production and placement shall be submitted to the Department for approval each calendar year and at a minimum of 30 days prior to production or placement.

Production or placement shall not occur until all QCP components have been approved by the Engineer.

Each QCP shall include the name and qualifications of a Quality Control Manager (QCM). The QCM shall be responsible for the administration of the QCP, and any modifications that may become necessary.

The QCM shall have the ability to direct all Contractor personnel on the Project during paving operations.

The QCPs shall also include the name and qualifications of any outside testing laboratory performing any QC functions on behalf of the Contractor. The QC Technician performing in-place density testing shall be NETTCP certified as a paving inspector.

Approval of the QCP does not relieve the Contractor of its responsibility to comply with the Project specifications. The Contractor may modify the QCPs as work progresses and must document the changes in writing prior to resuming operations. These changes include but are not limited to changes in quality control procedures or personnel. The Department reserves the right to deny significant changes to the QCPs.

QCP for Production: Refer to M.04.03-1.

QCP for Placement: The Standard QCP, Project Summary Sheet, and Extended Season Paving Plan shall conform to the format provided by the Engineer. The format is available at http://www.ct.gov/dot/lib/dot/documents/dconstruction/pat/qcp_outline_hma_placement.pdf

The Contractor shall perform all quality control sampling and testing, provide inspection, and exercise management control to ensure that bituminous concrete placement conforms to the requirements as outlined in its QCP during all phases of the work. The Contractor shall document these activities for each day of placement.

The Contractor shall submit complete field density testing and inspection records to the Engineer within 48 hours in a manner acceptable to the Engineer.

The Contractor may obtain 1 mat core and 1 joint core per day for process control, provided this process is detailed in the QCP. The results of these process control cores shall not be used to dispute the Department’s determinations from the acceptance cores. The Contractor shall submit the location of each process control core to the Engineer for approval prior to taking the core. The core holes shall be filled to the same requirements described in Subarticle 4.06.03-10.

9. Temperature and Seasonal Requirements: Paving, including placement of temporary pavements, shall be divided into 2 seasons, “In-Season” and “Extended-Season.” In-Season paving occurs from May 1 to October 14, and Extended Season paving occurs from October 15 to April 30. The following requirements shall apply unless otherwise authorized or directed by the Engineer:

- Mixtures shall not be placed when the air or subbase temperature is less than 40°F regardless of the season.
- Should paving operations be scheduled during the Extended Season, the Contractor must submit an Extended Season Paving Plan for the Project that addresses minimum delivered mix temperature considering WMA, PMA, or other additives; maximum paver speed; enhanced rolling patterns; and the method to balance mixture delivery and placement

operations. Paving during Extended Season shall not commence until the Engineer has approved the plan.

10. Field Density The Contractor shall obtain cores for the determination of mat and longitudinal joint density of bituminous concrete pavements. Within five calendar days of placement, mat and joint cores shall be extracted on each lift with a specified thickness of 1 1/2 inches or more. Joint cores shall not be extracted on HMA S1.0 lifts.

The Contractor shall extract cores from random locations determined by the Engineer in accordance with ASTM D3665. Four (4) or six (6) inch diameter cores shall be extracted for S0.25, S0.375 and S0.5 mixtures; 6 inch diameter cores shall be required for S1.0 mixtures. The Contractor shall coordinate with the Engineer to witness the extraction, labeling of cores, and filling of the core holes.

Each lift will be separated into lots as follows:

- a. Simple Average Density Lots: For total estimated quantities below 2,000 tons, the lift will be evaluated in one lot which will include the total paved tonnage of the lift and all longitudinal joints between the curb lines.
For total estimated quantities between 2,000 and 3,500 tons, the lift will be evaluated in two lots in which each lot will include approximately half of the total tonnage placed for the full paving width of a lift including all longitudinal joints between the curb lines.
- b. PWL Density Lots: Mat density lots will include each 3,500 tons of mixture placed within 30 calendar days. Joint density lots will include 14,000 linear feet of constructed joints. Bridge density lots will always be analyzed using simple average lot methodology.
- c. Partial Density Lot (For PWL only): A mat density lot with less than 3,500 tons or a joint density lot with less than 14,000 linear feet due to:
 - completion of the course; or
 - a lot spanning 30 calendar days.

Prior to paving, the type and number of lot(s) will be determined by the Engineer.

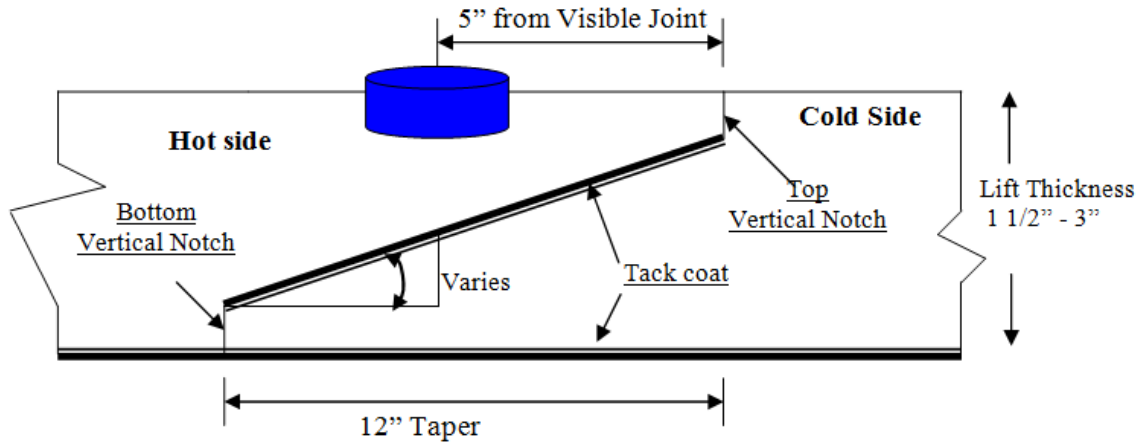
Noncontiguous areas such as highway ramps may be combined to create one lot.

After the lift has been compacted and cooled, the Contractor shall cut cores to a depth equal to or greater than the lift thickness and shall remove them without damaging the lift(s) to be tested. Any core that is damaged or obviously defective while being obtained will be replaced with a new core from a location within 2 feet measured in a longitudinal direction.

A mat core shall not be located any closer than 1 foot from the edge of a paver pass. If a random number locates a core less than 1 foot from any edge, the location will be adjusted by the Engineer so that the outer edge of the core is 1 foot from the edge of the paver pass.

Method I, Notched Wedge Joint cores shall be taken so that the center of the core is 5 inches from the visible joint on the hot mat side (Figure 4.06-4).

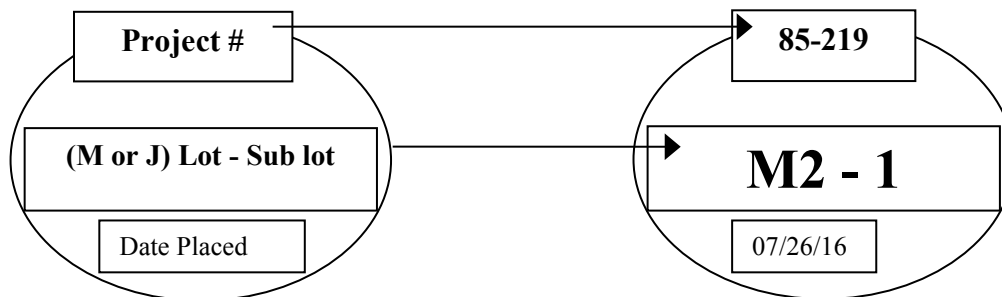
Figure 4.06-4: Notched Wedge Joint Cores (Not to Scale)



When Method II or Method III Butt Joint is used, cores shall be taken from the hot side so the edge of the core is within 1 inch of the longitudinal joint.

The cores shall be labeled by the Contractor with the Project number, date placed, lot number, and sub-lot number. The core's label shall include "M" for a mat core and "J" for a joint core. For example, a mat core from the first lot and the first sub-lot shall be labeled with "M1 - 1." A mat core from the second lot and first sub-lot shall be labeled "M2-1" (see Figure 4.06-5). The Engineer shall fill out a MAT-109 to accompany the cores. The Contractor shall deliver the cores and MAT-109 to the Department's Central Lab. The Contractor shall use a container approved by the Engineer. The container shall have a lid capable of being locked shut and tamper proof. The Contractor shall use foam, bubble wrap, or another suitable material to prevent the cores from being damaged during handling and transportation. Once the cores and MAT-109 are in the container the Engineer will secure the lid using security seals at the removable hinges(s) and at the lid opening(s). The security seals' identification number must be documented on the MAT-109. All sealed containers shall be delivered to the Department's Central Lab within two working days from time of extraction. Central Lab personnel will break the security seal and take possession of the cores.

Figure 4.06-5: Labeling of Cores



Each core hole shall be filled within 4 hours upon core extraction. Prior to being filled, the hole shall be prepared by removing any free water and applying tack coat using a brush or other

means to uniformly cover the cut surface. The core hole shall be filled using a bituminous concrete mixture at a minimum temperature of 240°F containing the same or smaller nominal maximum aggregate size and compacted with a hand compactor or other mechanical means to the maximum compaction possible. The bituminous concrete shall be compacted to 1/8 inch above the finished pavement.

Simple Average Density Lots:

A standard simple average density lot is the quantity of material placed within the defined area excluding any bridge decks.

A combo simple average density lot is the quantity of material placed within the defined area including bridge decks less than or equal to 500 feet long.

A bridge simple average density lot is the quantity of material placed on a bridge deck longer than 500 feet.

The number of cores per lot shall be determined in accordance with Table 4.06-4. If a randomly selected mat or joint core location is on a bridge deck, the core is to be obtained on the bridge deck in addition to the core(s) required on the bridge deck.

The number of cores per lot shall be determined in accordance with Table 4.06-5. Multiple bridge decks can be combined into one lot if the paving and underlying conditions are comparable. If multiple bridge decks are combined into a single bridge lot, at least one mat and joint core shall be obtained on each bridge.

The longitudinal locations of mat cores within a standard, combo, or bridge lot containing multiple paving passes will be determined using the combined length of the paving passes within the lot.

TABLE 4.06-4: Number of Cores per Lot (Simple Average)

Lot Type	No. of Mat Cores		No. of Joint Cores	
Standard Lot < 500 Tons	3		3	
Standard Lot ≥ 500 Tons	4		4	
Combo Lot < 500 Tons	2 plus	1 per bridge (≤ 300')	2 plus	1 per bridge (≤ 300')
Combo Lot ≥ 500 Tons ⁽¹⁾	4 plus	2 per bridge (301' – 500')	4 plus	2 per bridge (301' – 500')

TABLE 4.06-5: Number of Core per Bridge Density Lot (Simple Average)

Length of Bridge(s) (Feet)	Minimum No. of Mat Cores	Minimum No. of Joint Cores
< 500	2	2
501 – 1,500	3	3
1,501 – 2,500	4	4
2,501 and greater	5	5

PWL Density Lots:

A PWL mat density lot is 3,500 tons of material placed within the defined area excluding any bridges. One mat core will be obtained per every 500 tons placed.

A PWL joint density lot is 14,000 linear feet of longitudinal joint excluding any joints on bridge decks. One joint core will be obtained per every 2,000 linear feet of joint.

Bridge density lots will always be analyzed as using the simple average lot methodology. The number of cores per lot shall be determined in accordance with Table 4.06-5. Multiple bridge decks can be combined into one lot if the paving and underlying conditions are comparable. If multiple bridge decks are combined into a single bridge lot, at least one mat and joint core shall be obtained on each bridge.

11. Acceptance Sampling and Testing: Sampling shall be performed in accordance with ASTM D3665 or a statistically-based procedure of stratified random sampling approved by the Engineer.

Plant Material Acceptance: The Contractor shall provide the required sampling and testing during all phases of the work in accordance with M.04. The Department will verify the Contractor's acceptance test results. Should any test results exceed the specified tolerances in the Department's current QA Program for Materials, the Contractor's test results for a subject lot or sub lot may be replaced with the Department's results for the purpose of calculating adjustments. The verification procedure is included in the Department's current QA Program for Materials.

Density Acceptance: The Engineer will perform all acceptance testing in accordance with AASHTO T 331. The density of each core will be determined using the daily production's average maximum theoretical specific gravity (Gmm) established during the testing of the parent material at the Plant. When there was no testing of the parent material or any Gmm exceeds the specified tolerances in the Department's current QA Program for Materials, the Engineer will determine the maximum theoretical density value to be used for density calculations.

12. Density Dispute Resolution Process: The Contractor and Engineer will work in partnership to avoid potential conflicts and to resolve any differences that may arise during quality control or acceptance testing for density. Both parties will review their sampling and testing procedures and results and share their findings. If the Contractor disputes the Engineer's test results, the Contractor must submit in writing a request to initiate the Dispute Resolution Process within five calendar days of the notification of the test results. No request for dispute resolution will be allowed unless the Contractor provides quality control results from samples taken prior to and after finish rolling, and within the timeframe described in 4.06.03-8 supporting its position. No request for dispute resolution will be allowed for a density lot in which any core was not taken within the required 5 calendar days of placement. Should the dispute not be resolved through evaluation of existing testing data or procedures, the Engineer may authorize the Contractor to obtain a new core or set of core samples per disputed lot. The core samples must be extracted no later than seven calendar days from the date of the Engineer's authorization. All such core samples shall be extracted and the core hole filled using the procedure outlined in 4.06.03-10.

a) **Simple Average Lots:** The Contractor may only dispute any simple average lot that is adjusted at or below 95 percent payment. The number and location (mat, joint, or structure) of the cores taken for dispute resolution must reflect the number and location of the original cores. The location of each core shall be randomly located within the respective original sub lot. The dispute resolution results shall be combined with the original results and averaged for determining the final in-place density value.

b) **PWL Lots:** The Contractor may dispute any PWL subplot when the PWL falls below 50%

calculated in accordance with section 4.06.04.2.b. An additional random core in the subplot may be taken to validate the accuracy of the core in question. The Department will verify the additional core test result and may average the original test result with the additional core result for purpose of calculating adjustments.

13. Corrective Work Procedure:

If pavement placed by the Contractor does not meet the specifications, and the Engineer requires its replacement or correction, the Contractor shall:

- a) Propose a corrective procedure to the Engineer for review and approval prior to any corrective work commencing. The proposal shall include:
 - Limits of pavement to be replaced or corrected, indicating stationing or other landmarks that are readily distinguishable.
 - Proposed work schedule.
 - Construction method and sequence of operations.
 - Methods of maintenance and protection of traffic.
 - Material sources.
 - Names and telephone numbers of supervising personnel.
- b) Any corrective courses placed as the final wearing surface shall match the specified lift thickness after completion.

14. Protection of the Work: The Contractor shall protect all sections of the newly finished pavement from damage that may occur as a result of the Contractor’s operations for the duration of the Project.

15. Cut Bituminous Concrete Pavement: Work under this item shall consist of making a straight-line cut in the bituminous concrete pavement to the lines delineated on the plans or as directed by the Engineer. The cut shall provide a straight, clean, vertical face with no cracking, tearing or breakage along the cut edge.

4.06.04—Method of Measurement:

1. HMA S* or PMA S*: Bituminous concrete will be measured for payment as the amount of material in tons placed as determined by the net weight on the delivered tickets and adjusted by area, thickness and weight as follows:

Quantity Adjustments: Adjustments may be applied to the placed bituminous concrete quantities that will be measured for payment using the following formulas:

Yield Factor for Adjustment Calculation = 0.0575 tons/SY/inch

Actual Area (SY) = [(Measured Length (ft)) x (Avg. of width measurements (ft))] ÷ 9 s.f./SY

Actual Thickness (t) = Total tons delivered / [Actual Area (SY) x 0.0575 tons/SY/inch]

- a) Area: If the average width exceeds the allowable tolerance, an adjustment will be made using the following formula. The tolerance for width is equal to the specified thickness (inch) of the lift being placed.

Quantity Adjusted for Area (TA) = [(L x W_{adj})/9] x (t) x 0.0575 Tons/SY/inch = (-) tons

Where: L = Length (ft)

(t) = Actual thickness (inches)

W_{adj} = (Designed width (ft) + tolerance /12) - Measured Width)

- b) Thickness: If the actual average thickness is less than the allowable tolerance, the Contractor shall submit a repair procedure to the Engineer for approval. If the actual thickness exceeds the allowable tolerance, an adjustment will be made using the following formula:

$$\text{Quantity Adjusted for Thickness (T}_T\text{)} = A \times t_{\text{adj}} \times 0.0575 = (-) \text{ tons}$$

Where: A = Area = $\{[L \times (\text{Design width} + \text{tolerance (lift thickness)/12}]\} / 9\}$
 t_{adj} = Adjusted thickness = $[(Dt + \text{tolerance}) - \text{Actual thickness}]$
 Dt = Designed thickness (inches)

- c) Weight: If the quantity of bituminous concrete representing the mixture delivered to the Project is in excess of the allowable gross vehicle weight (GVW) for each vehicle, an adjustment will be made using the following formula:

$$\text{Quantity Adjusted for Weight (T}_w\text{)} = \text{GVW} - \text{DGW} = (-) \text{ tons}$$

Where: DGW = Delivered gross weight as shown on the delivery ticket or measured on a certified scale

2. Bituminous Concrete Adjustment Cost:

- a) Production Lot Adjustment: An adjustment may be applied to each production lot as follows:

- i. Non-PWL Production Lot (less than 3,500 tons):

The adjustment values in Tables 4.06-6 and 4.06-7 will be calculated for each sub lot based on the Air Void (AV) and Asphalt Binder Content (PB) test results for that sub lot. The total adjustment for each day's production (lot) will be computed as follows:

$$\text{Tons Adjusted for Superpave Design (T}_{\text{SD}}\text{)} = [(\text{AdjAV}_t + \text{AdjPB}_t) / 100] \times \text{Tons}$$

Where: AdjAV_t: Percent adjustment for air voids

AdjPB_t: Percent adjustment for asphalt binder

Tons: Weight of material (tons) in the lot adjusted by 4.06.4-1

$$\text{Percent Adjustment for Air Voids} = \text{AdjAV}_t = [\text{AdjAV}_1 + \text{AdjAV}_2 + \text{AdjAV}_i + \dots + \text{AdjAV}_n] / n$$

Where: AdjAV_t = Total percent air void adjustment value for the lot

AdjAV_i = Adjustment value from Table 4.06-6 resulting from each sub lot or the average of the adjustment values resulting from multiple tests within a sub lot, as approved by the Engineer.

n = number of sub lots based on Table M.04.03-2

TABLE 4.06-6: Adjustment Values for Air Voids

Adjustment Value (AdjAV _i) (%)	S0.25, S0.375, S0.5, S1 Air Voids (AV)
+2.5	3.8 - 4.2
+3.125*(AV-3)	3.0 - 3.7
-3.125*(AV-5)	4.3 - 5.0
20*(AV-3)	2.3 - 2.9
-20*(AV-5)	5.1 - 5.7
-20.0	≤ 2.2 or ≥ 5.8

Percent Adjustment for Asphalt Binder = $AdjPB_t = [(AdjPB_1 + AdjPB_2 + AdjPB_i + \dots + AdjPB_n)] / n$

Where: $AdjPB_t$ = Total percent liquid binder adjustment value for the lot

$AdjPB_i$ = Adjustment value from Table 4.06-7 resulting from each sub lot

n = number of binder tests in a production lot

TABLE 4.06-7: Adjustment Values for Binder Content

Adjustment Value (AdjAV _i) (%)	<u>S0.25, S0.375, S0.5, S1</u> Pb
0.0	JMF Pb ± 0.3
- 10.0	≤ JMF Pb - 0.4 or ≥ JMF Pb + 0.4

ii. PWL Production Lot (3500 tons or more):

For each lot, the adjustment values will be calculated using PWL methodology based on AV, VMA, and PB test results. The results will be considered as being normally distributed and all applicable equations in AASHTO R 9 and AASHTO R 42 Appendix X4 will apply.

Only one test result will be considered for each sub lot. The specification limits are listed in M.04.

For AV, PB, and voids in mineral aggregate (VMA), the individual material quantity characteristic adjustment (Adj) will be calculated as follows:

For PWL between 50 and 90%: $Adj(AV_t \text{ or } PB_t \text{ or } VMA_t) = (55 + 0.5 \text{ PWL}) - 100$

For PWL at and above 90%: $Adj(AV_t \text{ or } PB_t \text{ or } VMA_t) = (77.5 + 0.25 \text{ PWL}) - 100$

Where: $AdjAV_t$ = Total percent AV adjustment value for the lot

$AdjPB_t$ = Total percent PB adjustment value for the lot

$AdjVMA_t$ = Total percent VMA adjustment value for the lot

A lot with PWL less than 50% in any of the 3 individual material quality characteristics will be evaluated under 1.06.04.

The total adjustment for each production lot will be computed using the following formula:

Tons Adjusted for Superpave Design (T_{SD}) = $[(0.5AdjAV_t + 0.25AdjPB_t + 0.25 AdjVMA_t) / 100] \times \text{Tons}$

Where Tons: Weight of material (tons) in the lot adjusted by 4.06.4-1

iii. Partial Lots:

Lots with less than 4 sub lots will be combined with the prior lot. If there is no prior lot with equivalent material or if the last test result of the prior lot is over 30 calendar days old, the adjustment will be calculated as indicated in 4.06.04-2.a)i.

Lots with 4 or more sub lots will be calculated as indicated in 4.06.04-2.a)ii.

Production Lot Adjustment: $T_{SD} \times \text{Unit Price} = \text{Est. (Pi)}$

Where: Unit Price = Contract unit price per ton per type of mixture

Est. (Pi)= Pay Unit in dollars representing incentive or disincentive per lot

b) Density Lot Adjustment: An adjustment may be applied to each density lot as follows:

i. Simple Average Density Lot (less than 3500 tons) and Bridge Lots:

The final lot quantity shall be the difference between the total payable tons for the Project and the sum of the previous lots. If either the Mat or Joint adjustment value is “remove and replace,” the density lot shall be removed and replaced (curb to curb).

No positive adjustment will be applied to a density lot in which any core was not taken within the required 5 calendar days of placement.

Tons Adjusted for Density (T_D) = $[\{(P_{AM} \times 0.50) + (P_{AJ} \times 0.50)\} / 100] \times \text{Tons}$

Where: T_D = Total tons adjusted for density for each lot

P_{AM} = Mat density percent adjustment from Table 4.06-8

P_{AJ} = Joint density percent adjustment from Table 4.06-9

Tons: Weight of material (tons) in the lot adjusted by 4.06.4-1

TABLE 4.06-8: Adjustment Values for Pavement Mat density

Average Core Result Percent Mat Density	Percent Adjustment (Bridge and Non-Bridge) ⁽¹⁾⁽²⁾
97.1 - 100	-1.667*(ACRPD-98.5)
94.5 – 97.0	+2.5
93.5 – 94.4	+2.5*(ACRPD-93.5)
92.0 – 93.4	0
90.0 – 91.9	-5*(92-ACRPD)
88.0 – 89.9	-10*(91-ACRPD)
87.0 – 87.9	-30
86.9 or less	Remove and Replace (curb to curb)

Notes:

⁽¹⁾ ACRPD = Average Core Result Percent Density

⁽²⁾ All Percent Adjustments to be rounded to the second decimal place; for example round 1.667 to 1.67.

TABLE 4.06-9: Adjustment Values for Pavement Joint Density

Average Core Result	Percent Adjustment (Bridge and Non-Bridge) ⁽¹⁾⁽²⁾
Percent Joint Density	
97.1 – 100	-1.667*(ACRPD-98.5)
93.5 – 97.0	+2.5
92.0 – 93.4	+1.667*(ACRPD-92)
91.0 – 91.9	0
89.0 – 90.9	-7.5*(91-ACRPD)
88.0 – 88.9	-15*(90-ACRPD)
87.0 – 87.9	-30
86.9 or less	Remove and Replace (curb to curb)

Notes:

⁽¹⁾ ACRPD = Average Core Result Percent Density

⁽²⁾ All Percent Adjustments to be rounded to the second decimal place; for example round 1.667 to 1.67

Additionally, any subplot with a density result below 87% will be evaluated under 1.06.04.

ii. PWL Density Lot (3,500 tons or more):

For each lot, the adjustment values will be calculated using PWL methodology based on mat and joint density test results. Only one result will be included for each subplot. The results will be considered as being normally distributed and all applicable equations in AASHTO R 9 and AASHTO R 42 Appendix X4 will apply.

The specification limits for the PWL determination are as follows:

Mat Density: 91.5-98%

Joint Density: 90-98%

For mat and joint density, the individual percent adjustment (PA) will be calculated as follows:

For PWL between 50 and 90%: $PA_{(M \text{ or } J)} = 0.25 * PWL - 22.50$

For PWL at and above 90%: $PA_{(M \text{ or } J)} = 0.125 * PWL - 11.25$

Where: PA_M = Total percent mat density adjustment value for the PWL mat density lot

PA_J = Total percent joint density adjustment value for the PWL joint density lot

No positive adjustment will be applied to a density lot in which any core was not taken within the required 5 calendar days of placement.

A lot with PWL less than 50% will be evaluated under 1.06.04.

The total adjustment for each PWL mat density lot will be computed as follows:

Tons Adjusted for Mat Density (T_{MD}) = $(PA_M / 100) \times \text{Tons}$

Where: Tons= Weight of material (tons) in the lot adjusted by 4.06.4-1.

The total adjustment for each PWL joint density lot will be computed as follows:

Tons Adjusted for Joint Density (T_{JD}) = (P_{AJ} / 100) X J_Tons

Tons Adjusted for Joint Density will be calculated at the end of each project or project phase.

Where: J_Tons = Tons in project or phase adjusted by 4.06.4 – 1 x $\frac{\text{Lot joint length}}{\text{Joint length in project or phase}}$

All bridge density lot adjustments will be evaluated in accordance with 4.06.04-2.b)i.

Additionally, any subplot with a density result below 87% will be evaluated under 1.06.04.

iii. Partial Lots:

Lots with less than 4 sub lots will be combined with the prior lot. If there is no prior lot with equivalent material and placement conditions or if the last test result of the prior lot is over 30 calendar days old, the mat and joint individual adjustments will be calculated in accordance to Tables 4.06-8 and 4.06-9. T_{MD} and T_{JD} will be calculated as indicated in 4.06.04-2.b)i.

Lots with 4 or more sub lots will be calculated as indicated in 4.06.04-2.b)ii.

Density Lot Adjustment (Simple Average Lots): T_D x Unit Price = Est. (Di)

Density Lot Adjustment (PWL Lots): (T_{MD} or T_{JD}) x Unit Price = Est. (DMi or DJi)

Where: Unit Price = Contract unit price per ton per type of mixture

Est. (Di)= Pay Unit in dollars representing incentive or disincentive per simple average density lot

Est. (DMi)= Pay Unit in dollars representing incentive or disincentive per PWL mat lot

Est. (DJi)= Pay Unit in dollars representing incentive or disincentive per PWL joint lot

Additionally, any subplot with a density result below 87% will be evaluated under 1.06.04.

3. Transitions for Roadway Surface: The installation of permanent transitions will be measured under the appropriate item used in the formation of the transition.

The quantity of material used for the installation of temporary transitions will be measured for payment under the appropriate item used in the formation of the transition. The installation and removal of a bond breaker and the removal and disposal of any temporary transition formed by milling or with bituminous concrete pavement is not measured for payment.

4. Cut Bituminous Concrete Pavement: The quantity of bituminous concrete pavement cut will be measured in accordance with 2.02.04.

5. Material for Tack Coat: The quantity of tack coat will be measured for payment by the number of gallons furnished and applied on the Project and approved by the Engineer. No tack coat material shall be included that is placed in excess of the tolerance described in 4.06.03.

- a. Container Method – Material furnished in a container will be measured to the nearest 1/2 gallon. The volume will be determined by either measuring the volume in the original container by a method approved by the Engineer or using a separate graduated container

capable of measuring the volume to the nearest 1/2 gallon. The container in which the material is furnished must include the description of material, including lot number or batch number and manufacturer or product source.

b. Vehicle Method

i. Measured by Weight: The number of gallons furnished will be determined by weighing the material on calibrated scales furnished by the Contractor. To convert weight to gallons, one of the following formulas will be used:

Tack Coat (gallons at 60°F) = Measured Weight (pounds) / Weight per gallon at 60°F

Tack Coat (gallons at 60°F) = 0.996 x Measured Weight (pounds) / Weight per gallon at 77°F

ii. Measured by automated metering system on the delivery vehicle:

Tack Coat (gallons at 60°F) = 0.976 x Measured Volume (gallons).

6. Material Transfer Vehicle (MTV): The furnishing and use of a MTV will be measured separately for payment based on the actual number of surface course tons delivered to a paver using the MTV.

4.06.05—Basis of Payment:

1. HMA S* or PMA S*: The furnishing and placing of bituminous concrete will be paid for at the Contract unit price per ton for " HMA S*" or " PMA S*."

All costs associated with providing illumination of the work area are included in the general cost of the work.

All costs associated with cleaning the surface to be paved, including mechanical sweeping, are included in the general cost of the work. All costs associated with constructing longitudinal joints are included in the general cost of the work.

All costs associated with obtaining cores for acceptance testing and dispute resolution are included in the general cost of the work.

2. Bituminous Concrete Adjustment Costs: This adjustment will be calculated using the formulas shown below if all of the measured adjustments in 4.06.04-2 are not equal to zero. A positive or negative adjustment will be applied to monies due the Contractor.

Production Lot: $\Sigma \text{ Est (Pi)} = \text{Est. (P)}$

Density Lot (Simple Average Lots): $\Sigma \text{ Est (Di)} = \text{Est. (D)}$

Density Lot (PWL): $\Sigma \text{ Est (DMi)} + \Sigma \text{ (DJi)} = \text{Est. (D)}$

Bituminous Concrete Adjustment Cost= Est. (P) + Est. (D)

Where: Est. ()= Pay Unit in dollars representing incentive or disincentive in each production or density lot calculated in 4.06.04-2

The Bituminous Concrete Adjustment Cost item, if included in the bid proposal or estimate, is not to be altered in any manner by the Bidder. If the Bidder should alter the amount shown, the altered figure will be disregarded and the original estimated cost will be used for the Contract.

3. Transitions for Roadway Surface: The installation of permanent transitions will be paid under the appropriate item used in the formation of the transition. The quantity of material used for the installation of temporary transitions will be paid under the appropriate pay item used in the formation of the transition. The installation and removal of a bond breaker, and the removal and disposal of any temporary transition formed by milling or with bituminous concrete

pavement is included in the general cost of the work.

4. The cutting of bituminous concrete pavement will be paid in accordance with 2.02.05.
5. Material for tack coat will be paid for at the Contract unit price per gallon at 60°F for "Material for Tack Coat."
6. The Material Transfer Vehicle (MTV) will be paid at the Contract unit price per ton for "Material Transfer Vehicle."

Pay Item	Pay Unit
HMA S*	ton
PMA S*	ton
Bituminous Concrete Adjustment Cost	est.
Material for Tack Coat	gal.
Material Transfer Vehicle	ton

SECTION 5.86 - CATCH BASINS, MANHOLES AND DROP INLETS

5.86.01—Description

5.86.02—Materials

5.86.03—Construction Methods

5.86.04—Method of Measurement

5.86.05—Basis of Payment

5.86.01—Description: The work under this Section shall consist of furnishing, preparing, and installing catch basins, manholes and drop inlets (and also the removal, abandonment, alteration, reconstruction, or conversion of such existing structures) in conformity with the lines, grades, dimensions and details shown on the plans.

This Section shall also include resetting or replacing catch basin tops as well as manhole frames and covers.

5.86.02—Materials: The materials for this work shall meet the following requirements:

Drainage structures shall meet the requirements of M.08.02 and shall utilize concrete with a 28-day minimum compressive strength of 4000 psi.

Galvanizing shall meet the requirements of M.06.03.

Mortar shall meet the requirements of M.11.04.

Butyl rubber joint seal shall meet the requirements of ASTM C990.

Granular fill, if necessary, shall meet the requirements of M.02.01.

Protective compound material shall be a type appearing on the Department's Qualified Products List and be acceptable to the Engineer, as specified in M.03.09.

5.86.03—Construction Methods: Drainage trench excavation, including rock in drainage trench excavation and backfilling, shall be performed in accordance with 2.86.03 and the requirements of the plans.

Where a drainage structure is to be installed below the surface, a drainage trench shall be excavated to the required depth, the bottom of which shall be graded to the elevation of the bottom of the proposed drainage structure or to ensure a uniform foundation for the structure.

Where a firm foundation is not encountered at the grades established due to unsuitable material, such as soft, spongy, or unstable soil, the unsuitable material shall be removed and replaced with approved granular fill, thoroughly compacted in lifts not to exceed 6 inches. The Engineer shall be notified prior to removal of the unsuitable material in order to determine the depth of removal necessary.

When rock, as defined in 2.86.01-2, is encountered, work shall be performed in accordance with 2.86.03 and the requirements of the plans.

When a drainage structure outside of proposed drainage trench limits is to be removed, it shall be completely removed and all pipes shall be removed or plugged with cement masonry.

When a drainage structure is to be abandoned, the structure shall be removed to a depth 2 feet below the subgrade or as directed by the Engineer. The floor of the structure shall be broken and all pipes shall be plugged with cement masonry.

Drainage structures shall be constructed in accordance with the plans and the requirements contained herein for the character of the work involved. The provisions of 6.02.03 pertaining to bar reinforcement shall apply except that shop drawings need not be submitted for approval unless called for in the plans, Contract or directed by the Engineer. Welding shall be performed in accordance with the applicable sections of the AWS Structural Welding Code, D1.1.

When it becomes necessary to increase the horizontal dimensions of manholes, catch basins and drop inlets to sizes greater than those shown on the plans in order to provide for multiple pipe installations, large pipes or for other reasons, the Contractor shall construct such manholes, catch basins and drop inlets to modified dimensions as directed by the Engineer.

The surfaces of the tops of all catch basins, and drop inlets shall be given a coat of protective compound material, at the manufacturer's recommended application rate, immediately upon completion of the concrete curing period.

All masonry units shall be laid in full mortar beds.

Metal fittings for catch basins, manholes or drop inlets shall be set in full mortar beds or otherwise secured as shown on the plans.

All inlet and outlet pipes shall be set flush with the inside face of the wall of the drainage structure as shown on the plans. The pipes shall extend through the walls for a sufficient distance beyond the outside surface to allow for satisfactory connections, and the concrete or masonry shall be constructed around them neatly to prevent leakage along their outer surfaces.

When constructing a new drainage structure within a run of existing pipe, the section of existing pipe disturbed by the construction shall be replaced with new pipe of identical type and size extending from the drainage structure to the nearest joint of the existing pipe in accordance with 6.86.03 or as directed by the Engineer.

Backfilling shall be performed in accordance with 2.86.03.

Frames, covers and tops which are to be reset shall be removed from their present beds, the walls or sides shall be rebuilt to conform to the requirements of the new construction and the frames, covers and tops shall be reset as shown on the plans or as directed by the Engineer.

5.86.04—Method of Measurement:

Drainage Trench Excavation: In accordance with 2.86.04, excavation for drainage trench will not be measured for payment but shall be included in the Contract unit price for the type of structure being installed.

Rock in Drainage Trench Excavation: Rock in Drainage Trench Excavation will be measured in accordance with the drainage trench excavation limits described in 2.86.03.

Manholes, Catch Basins and Drop Inlets will be measured as separate units.

Resetting of Manholes, Catch Basins and Drop Inlets will be measured as separate units.

Replacement of frames, covers, and tops will be measured as a unit for catch basin top or manhole frame and cover.

Conversion of drainage structures as specified on the plans, or as directed by the Engineer, including structure reconstruction will be measured for payment as a unit.

Removal or abandonment of drainage structures outside of drainage trench excavation limits, as defined in 2.86.03, will be measured as separate units.

There will be no measurement or direct payment for the application of the protective compound material, the cost of this work shall be considered as included in the general cost of the work.

Measurement for payment for work and materials involved with installing pipes to connect new drainage structures into a run of existing pipe will be as provided for under the applicable Contract items in accordance with 6.86.04.

There will be no measurement or direct payment for plugging existing pipes with cement masonry, the cost of this work will be considered as included in the general cost of the work.

5.86.05—Basis of Payment:

Drainage Trench Excavation for the installation of proposed structures described herein will be paid for under the respective drainage Contract item(s) for which the excavation is being performed, in accordance with the provisions of 2.86.05.

Rock in Drainage Trench Excavation will be paid for in accordance with the provisions of 2.86.05.

Manholes and Catch Basins will be paid for at the Contract unit price for each "Manhole," or "Catch Basin," of the type specified, at "0' to 10' Deep" or "0' to 20' Deep," complete in place, which price shall include all excavation, backfill, materials, equipment, tools and labor incidental thereto.

Drop Inlets will be paid for at the Contract unit price for each "Drop Inlet," of the type specified, complete in place, which price shall include all excavation, backfill, materials, equipment, tools and labor incidental thereto.

Manholes, Catch Basins and Drop Inlets constructed to modified dimensions as directed by the Engineer, will be paid for as follows:

Where the interior floor area has to be increased to accommodate existing field conditions, as measured horizontally at the top of the base of the completed structure, and does not exceed 125% of the interior floor area as shown on the plans for that structure, then the structure shall be paid for at the Contract unit price for each "Manhole," "Catch Basin," or "Drop Inlet" of the type specified. Where the floor area is greater than 125%, the increase in the unit price for the individual structure shall be in direct proportion to the increase of the completed structure interior floor area as compared to the interior floor area as shown on the plans for that structure. Such increased unit price shall include all excavation, materials, equipment, tools, and labor incidental to the completion of the structure.

Reset Units will be paid for at the Contract unit price each for "Reset Manhole," "Reset Catch Basin," or "Reset Drop Inlet," of the type specified, respectively, complete in place, which price shall include excavation, cutting of pavement, removal and replacement of pavement structure, and all materials, equipment, tools and labor incidental thereto, except when the work requires reconstruction greater than 3 feet, measured vertically, then the entire cost of resetting the unit will be paid for as Extra Work in accordance with the provisions of 1.04.05.

Frames, Covers, and Tops when required in connection with reset units, will be paid for at the Contract unit price each for such "Manhole Frame and Cover" or "(Type) Catch Basin Top," complete in place, including all incidental expense; or when no price exists, the furnishing and placing of such material will be paid for as Extra Work in accordance with the provisions of 1.04.05.

When the catch basin top has a stone or granite curb in its design, the curb or inlet shall be included in the cost of the "(Type) Catch Basin Top."

Conversion of drainage structures will be paid for at the Contract unit price each for "Convert Catch Basin to (Type) Catch Basin," "Convert Catch Basin to (Type) Manhole," or

"Convert Manhole to (Type) Catch Basin," complete in place, which price shall include excavation, cutting of pavement, removal and replacement of pavement, backfill, all alterations to existing structure, all materials including catch basin frame and grate of the type specified, or manhole frame and cover, all equipment, tools and labor incidental thereto.

The maximum change in elevation of frame under these items shall not exceed 3 feet. Greater depth changes, if required, shall be paid for as Extra Work, in accordance with 1.04.05.

Removal or abandonment of drainage structures outside of drainage trench excavation limits as defined in 2.86.03 will be paid for at the Contract unit price each for "Remove Drainage Structure – 0' to 10' Deep," "Remove Drainage Structure – 0' to 20' Deep," or "Abandon Drainage Structure," which price shall include excavation, cutting of pavement, removal and replacement of pavement, backfill, and all equipment, tools and labor incidental thereto.

Pay Item	Pay Unit
(Type) Catch Basin – 0' to 10' Deep	ea.
(Type) Catch Basin – 0' to 20' Deep	ea.
Manhole (Size) – 0' to 10' Deep	ea.
Manhole (Size) – 0' to 20' Deep	ea.
(Type) Drop Inlet	ea.
Reset Catch Basin	ea.
Reset Manhole	ea.
Reset Drop Inlet	ea.
Convert Catch Basin to (Type) Catch Basin	ea.
Convert Catch Basin to (Type) Manhole	ea.
Convert Manhole to (Type) Catch Basin	ea.
Manhole Frame and Cover	ea.
(Type) Catch Basin Top	ea.
Remove Drainage Structure – 0' to 10' Deep	ea.
Remove Drainage Structure – 0' to 20' Deep	ea.
Abandon Drainage Structure	ea.

SECTION M.04 - BITUMINOUS CONCRETE MATERIALS

Section M.04 is being deleted in its entirety and replaced with the following:

M.04.01—Bituminous Concrete Materials and Facilities

M.04.02—Mix Design and Job Mix Formula (JMF)

M.04.03—Production Requirements

M.04.01—Bituminous Concrete Materials and Facilities: Each source of material, Plant, and laboratory used to produce and test bituminous concrete must be qualified on an annual basis by the Engineer. AASHTO or ASTM Standards noted with an (M) have been modified and are detailed in Table M.04.03-5.

Aggregates from multiple sources of supply must not be blended or stored in the same stockpile.

1. Coarse Aggregate: All coarse aggregate shall meet the requirements listed in M.01.

2. Fine Aggregate: All fine aggregate shall meet the requirements listed in M.01.

3. Mineral Filler: Mineral filler shall conform to the requirements of AASHTO M 17.

4. Performance Graded (PG) Asphalt Binder:

(a) General:

- i. PG asphalt binder shall be uniformly mixed and blended and be free of contaminants such as fuel oils and other solvents. Binder shall be properly heated and stored to prevent damage or separation.
- ii. The binder shall meet the requirements of AASHTO M 332 and shall be graded or verified in accordance with AASHTO R 29. The Contractor shall submit a Certified Test Report and bill of lading representing each delivery in accordance with AASHTO R 26(M). The Certified Test Report must also indicate the binder specific gravity at 77°F; rotational viscosity at 275°F and 329°F; and the mixing and compaction viscosity-temperature chart for each shipment.
- iii. The Contractor shall submit the name(s) of personnel responsible for receipt, inspection, and record keeping of PG binder. Contractor Plant personnel shall document specific storage tank(s) where binder will be transferred and stored until used and provide binder samples to the Engineer upon request. The person(s) shall assure that each shipment is accompanied by a statement certifying that the transport vehicle was inspected before loading was found acceptable for the material shipped and that the binder is free of contamination from any residual material, along with 2 copies of the bill of lading.
- iv. The blending or combining of PG binders in 1 storage tank at the Plant from different suppliers, grades, or additive percentages is prohibited.

(b) Basis of Approval: The request for approval of the source of supply shall list the location where the material will be manufactured, and the handling and storage methods, along with necessary certification in accordance with AASHTO R 26(M). Only suppliers/refineries that have an approved “Quality Control Plan for Performance Graded Binders” formatted in accordance with AASHTO R 26(M) may supply PG binders to Department projects.

(c) Standard Performance Grade (PG) Binder:

- i. Standard PG binder shall be defined as “Neat.” Neat PG binders shall be free from modification with: fillers, extenders, reinforcing agents, adhesion promoters,

thermoplastic polymers, acid modification and other additives such as re-refined motor oil, and shall indicate such information on each bill of lading and Certified Test Report.

ii. The standard asphalt binder shall be PG 64S-22.

(d) Modified Performance Grade (PG) Binder: The modified asphalt binder shall be Performance Grade PG 64E-22 asphalt modified solely with a Styrene-Butadiene-Styrene (SBS) polymer. The polymer modifier shall be added at either the refinery or terminal and delivered to the bituminous concrete production facility as homogenous blend. The stability of the modified binder shall be verified in accordance with ASTM D7173 using the Dynamic Shear Rheometer (DSR). The DSR $G^*/\sin(\delta)$ results from the top and bottom sections of the ASTM D7173 test shall not differ by more than 10%. The results of ASTM D7173 shall be included on the Certified Test Report. The binder shall meet the requirements of AASHTO M 332 (including Appendix X1) and AASHTO R 29.

(e) Warm Mix Additive or Technology:

- i. The warm mix additive or technology must be listed on the North East Asphalt User Producer Group (NEAUPG) Qualified Warm Mix Asphalt (WMA) Technologies List at the time of bid, which may be accessed online at <http://www.neaupg.uconn.edu>.
- ii. The warm mix additive shall be blended with the asphalt binder in accordance with the manufacturer's recommendations.
- iii. The blended binder shall meet the requirements of AASHTO M 332 and shall be graded or verified in accordance with AASHTO R 29 for the specified binder grade. The Contractor shall submit a Certified Test Report showing the results of the testing demonstrating the binder grade. In addition, it must include the grade of the virgin binder, the brand name of the warm mix additive, the manufacturer's suggested rate for the WMA additive, the water injection rate (when applicable), and the WMA Technology manufacturer's recommended mixing and compaction temperature ranges.

5. Emulsified Asphalts:

(a) General:

- i. The emulsified asphalt shall meet the requirements of AASHTO M 140(M) or AASHTO M 208 as applicable.
- ii. The emulsified asphalts shall be free of contaminants such as fuel oils and other solvents.
- iii. The blending at mixing Plants of emulsified asphalts from different suppliers is prohibited.

(b) Basis of Approval:

- i. The request for approval of the source of supply shall list the location where the material is manufactured, the handling and storage methods, and certifications in accordance with AASHTO R 77. Only suppliers that have an approved "Quality Control Plan for Emulsified Asphalt" formatted in accordance with AASHTO R 77 and that submit monthly split samples per grade to the Engineer may supply emulsified asphalt to Department projects.
- ii. Each shipment of emulsified asphalt delivered to the Project site shall be accompanied with the corresponding Certified Test Report listing Saybolt viscosity, residue by evaporation, penetration of residue, and weight per gallon at 77°F and Material Certificate.
- iii. Anionic emulsified asphalts shall meet the requirements of AASHTO M-140. Materials

used for tack coat shall not be diluted and meet grade RS-1 or RS-1h. When ambient temperatures are 80°F and rising, grade SS-1 or SS-1h may be substituted if permitted by the Engineer.

- iv. Cationic emulsified asphalt shall meet the requirements of AASHTO M-208. Materials used for tack coat shall not be diluted and meet grade CRS-1. The settlement and demulsibility test will not be performed unless deemed necessary by the Engineer. When ambient temperatures are 80°F and rising, grade CSS-1 or CSS-1h may be substituted if permitted by the Engineer.

6. Reclaimed Asphalt Pavement (RAP):

(a) General: RAP is a material obtained from the cold milling or removal and processing of bituminous concrete pavement. RAP material shall be crushed to 100% passing the 1/2 inch sieve and free from contaminants such as joint compound, wood, plastic, and metals.

(b) Basis of Approval: The RAP material will be accepted on the basis of one of the following criteria:

- i. When the source of all RAP material is from pavements previously constructed on Department projects, the Contractor shall provide a Materials Certificate listing the detailed locations and lengths of those pavements and that the RAP is only from those locations listed.
- ii. When the RAP material source or quality is not known, the Contractor shall request approval from the Engineer at least 30 calendar days prior to the start of the paving operation. The request shall include a Material Certificate and applicable test results stating that the RAP consists of aggregates that meet the specification requirements of M.04.01-1 through M.04.01-3 and that the binder in the RAP is substantially free of solvents, tars and other contaminants. The Contractor is prohibited from using unapproved material on Department projects and shall take necessary action to prevent contamination of approved RAP stockpiles. Stockpiles of unapproved material shall remain separate from all other RAP materials at all times. The request for approval shall include the following:
 - 1. A 50-lb. sample of the RAP to be incorporated into the recycled mixture.
 - 2. A 25-lb. sample of the extracted aggregate from the RAP.

7. Crushed Recycled Container Glass (CRCG):

(a) Requirements: The Contractor may propose to use clean and environmentally-acceptable CRCG in an amount not greater than 5% by weight of total aggregate.

(b) Basis of Approval: The Contractor shall submit to the Engineer a request to use CRCG. The request shall state that the CRCG contains no more than 1% by weight of contaminants such as paper, plastic, and metal and conforms to the following gradation:

CRCG Grading Requirements	
<u>Sieve Size</u>	<u>Percent Passing</u>
3/8 inch	100
No. 4	35-100
No. 200	0.0-10.0

The Contractor shall submit a Material Certificate to the Engineer stating that the CRCG complies with all the applicable requirements in this Section.

8. Joint Seal Material: Joint seal material must meet the requirements of ASTM D6690 - Type 2. The Contractor shall submit a Material Certificate in accordance with 1.06.07 certifying that the joint seal material meets the requirements of this Section.

9. Recycled Asphalt Shingles (RAS): RAS shall consist of processed asphalt roofing shingles from post-consumer asphalt shingles or from manufactured shingle waste. The RAS material under consideration for use in bituminous concrete mixtures must be certified as being asbestos-free and shall be entirely free of whole, intact nails. The RAS material shall meet the requirements of AASHTO MP 23.

The Producer shall test the RAS material to determine the asphalt content and the gradation of the RAS material. The Producer shall take necessary action to prevent contamination of RAS stockpiles.

The Contractor shall submit a Material Certificate to the Engineer stating that the RAS complies with all the applicable requirements in this Section.

10. Plant Requirements:

(a) General: The Plant producing bituminous concrete shall comply with AASHTO M 156.

(b) Storage Silos: The Contractor may use silos for short-term storage with the approval of the Engineer. A storage silo must have heated cones and an unheated silo cylinder if it does not contain a separate internal heating system. When multiple silos are filled, the Contractor shall discharge 1 silo at a time. Simultaneous discharge of multiple silos for the same Project is not permitted.

Type of silo cylinder	Maximum storage time for all classes (hr)	
	<u>HMA</u>	<u>WMA/PMA</u>
Open Surge	4	Mfg Recommendations*
Unheated - Non-insulated	8	Mfg Recommendations*
Unheated - Insulated	18	Mfg Recommendations*
Heated - No inert gas	TBD by the Engineer	TBD by the Engineer

*Not to exceed HMA limits

(c) Documentation System: The mixing Plant documentation system shall include equipment for accurately proportioning the components of the mixture by weight and in the proper order, controlling the cycle sequence, and timing the mixing operations. Recording equipment shall monitor the batching sequence of each component of the mixture and produce a printed record of these operations on each Plant ticket, as specified herein.

If recycled materials are used, the Plant tickets shall include their dry weight, percentage, and daily moisture content.

If a WMA Technology is added at the Plant, the Plant tickets shall include the actual dosage rate.

For drum Plants, the Plant ticket shall be produced at 5 minute intervals and maintained by the vendor for a period of 3 years after the completion of the Project.

For batch Plants, the Plant ticket shall be produced for each bath and maintained by the vendor for a period of 3 years after the completion of the Project. In addition, an asterisk (*)

shall be automatically printed next to any individual batch weight(s) exceeding the following tolerances:

Each Aggregate Component	±1.5% of individual or cumulative target weight for each bin
Mineral Filler	±0.5% of the total batch
Bituminous Material	±0.1% of the total batch
Zero Return (Aggregate)	±0.5% of the total batch
Zero Return (Bituminous Material)	±0.1% of the total batch

The entire batching and mixing interlock cut-off circuits shall interrupt and stop the automatic batching operations when an error exceeding the acceptable tolerance occurs in proportioning.

The scales shall not be manually adjusted during the printing process. In addition, the system shall be interlocked to allow printing only when the scale has come to a complete rest. A unique printed character (m) shall automatically be printed on the truck and batch plant printout when the automatic batching sequence is interrupted or switched to auto-manual or full manual during proportioning.

(d) Aggregates: Aggregate stockpiles shall be managed to prevent segregation and cross contamination. For drum Plants only, the percent moisture content, at a minimum prior to production and half way through production, shall be determined.

(e) Mixture: The dry and wet mix times shall be sufficient to provide a uniform mixture and a minimum particle coating of 95% as determined by AASTO T 195(M).

Bituminous concrete mixtures shall contain no more than 0.5% moisture when tested in accordance with AASHTO T 329.

(f) RAP: RAP moisture content shall be determined a minimum of twice daily (prior to production and halfway through production).

(g) Asphalt Binder: A binder log shall be submitted to the Department's Central Lab on a monthly basis.

(h) Warm mix additive: For mechanically foamed WMA, the water injection rate shall be monitored during production and not exceed 2.0% by total weight of binder. For additive added at the Plant, the dosage rate shall be monitored during production.

(i) Testing Laboratory: The Contractor shall maintain a laboratory to test bituminous concrete mixtures during production. The laboratory shall have a minimum of 300 s.f., have a potable water source and drainage in accordance with the CT Department of Public Health Drinking Water Division, and be equipped with all necessary testing equipment as well as with a PC, printer, and telephone with a dedicated hard-wired phone line. In addition, the PC shall have a high speed internet connection and a functioning web browser with unrestricted access to <https://ctmail.ct.gov>. This equipment shall be maintained in working order at all times and be made available for use by the Engineer.

The laboratory shall be equipped with a heating system capable of maintaining a minimum temperature of 65°F. It shall be clean and free of all materials and equipment not associated with the laboratory. Sufficient light and ventilation must be provided. During summer months

adequate cooling or ventilation must be provided so the indoor air temperature shall not exceed the ambient outdoor temperature.

The laboratory testing apparatus, supplies, and safety equipment shall be capable of performing all the applicable tests in their entirety that are referenced in AASHTO R 35 and AASHTO M 323. The Contractor shall ensure that the Laboratory is adequately supplied at all times during the course of the Project with all necessary testing materials and equipment.

The Contractor shall maintain a list of laboratory equipment used in the acceptance testing processes including, but not limited to, balances, scales, manometer/vacuum gauge, thermometers, and gyratory compactor, clearly showing calibration and/or inspection dates, in accordance with AASHTO R 18. The Contractor shall notify the Engineer if any modifications are made to the equipment within the laboratory. The Contractor shall take immediate action to replace, repair, or recalibrate any piece of equipment that is out of calibration, malfunctioning, or not in operation.

M.04.02—Mix design and Job Mix Formula (JMF)

1. Curb Mix:

(a) Requirements: The Contractor shall use bituminous concrete that meets the requirements of Table M.04.02-1. RAP may be used in 5% increments by weight up to 30%.

(b) Basis of Approval: Annually, an approved JMF based on a mix design for curb mix must be on file with the Engineer prior to use.

The Contractor shall test the mixture for compliance with the submitted JMF and Table M.04.02-1. The maximum theoretical density (Gmm) will be determined by AASHTO T 209. If the mixture does not meet the requirements, the JMF shall be adjusted within the ranges shown in Table M.04.02-1 until an acceptable mixture is produced.

An accepted JMF from the previous operating season may be acceptable to the Engineer provided that there are no changes in the sources of supply for the coarse aggregate, fine aggregate, recycled material (if applicable) and the Plant operation had been consistently producing acceptable mixture.

Any change in component source of supply or consensus properties must be approved by the Engineer. A revised JMF shall be submitted prior to use.

**TABLE M.04.02-1:
Control Points for Curb Mix Mixtures**

Mix	Curb Mix	Production Tolerances from JMF Target
Grade of PG Binder content %	PG 64S-22 6.5 - 9.0	0.4
Sieve Size		
No. 200	3.0 - 8.0 (b)	2.0
No. 50	10 - 30	4
No. 30	20 - 40	5
No. 8	40 - 70	6
No. 4	65 - 87	7
1/4 inch		
3/8 inch	95 - 100	8
1/2 inch	100	8
3/4 inch		8
1 inch		
2 inch		
Additionally, the fraction of material retained between any 2 consecutive sieves shall not be less than 4%.		
Mixture Temperature		
Binder	325°F maximum	
Aggregate	280-350°F	
Mixtures	265-325°F	
Mixture Properties		
Air Voids (VA) %	0 – 4.0 (a)	
Notes: (a) Compaction Parameter 50 gyrations (N_{des}) (b) The percent passing the No. 200 sieve shall not exceed the percentage of bituminous asphalt binder.		

2. Superpave Design Method – S0.25, S0.375, S0.5, and S1:

(a) **Requirements:** All designated mixes shall be designed using the Superpave mix design method in accordance with AASHTO R 35. A JMF based on the mix design shall meet the requirements of Tables M.04.02-2 to M.04.02-5. Each JMF and component samples must be submitted no less than 7 days prior to production and must be approved by the Engineer prior to use. All JMFs expire at the end of the calendar year.

All aggregate component consensus properties and tensile strength ratio (TSR) specimens shall be tested at an AASHTO Materials Reference Laboratory (AMRL) by NETTCP Certified Technicians.

All bituminous concrete mixes shall be tested for stripping susceptibility by performing the TSR test procedure in accordance with AASHTO T 283(M) at a minimum every 36 months. The compacted specimens may be fabricated at the Plant and then tested at an AMRL accredited facility. A minimum of 45000 grams of laboratory or plant blended mixture and the

corresponding complete Form MAT-412s shall be submitted to the Division of Material Testing (DMT) for design TSR testing verification. The mixture submitted shall be representative of the corresponding mix design as determined by the Engineer.

- i. Superpave Mixtures with RAP: RAP may be used with the following conditions:
 - RAP amounts up to 15% may be used with no binder grade modification.
 - RAP amounts up to 20% may be used provided a new JMF is approved by the Engineer. The JMF submittal shall include the grade of virgin binder added. The JMF shall be accompanied by a blending chart and supporting test results in accordance with AASHTO M 323 Appendix X1, or by testing that shows the combined binder (recovered binder from the RAP, virgin binder at the mix design proportions, warm mix asphalt additive and any other modifier if used) meets the requirements of the specified binder grade.
 - Two (2) representative samples of RAP shall be obtained. Each sample shall be split, and 1 split sample shall be tested for binder content in accordance with AASHTO T 164 and the other in accordance with AASHTO T 308.
 - RAP material shall not be used with any other recycling option.
 - ii. Superpave Mixtures with RAS: RAS may be used solely in HMA S1 mixtures with the following conditions:
 - RAS amounts up to 3% may be used.
 - RAS total binder replacement up to 15% may be used with no binder grade modification.
 - RAS total binder replacement up to 20% may be used provided a new JMF is approved by the Engineer. The JMF submittal shall include the grade of virgin binder added. The JMF shall be accompanied by a blending chart and supporting test results in accordance with AASHTO M 323 Appendix X1, or by testing that shows the combined binder (recovered binder from the RAP, virgin binder at the mix design proportions, warm mix asphalt additive and any other modifier if used) meets the requirements of the specified binder grade.
 - Superpave Mixtures with RAS shall meet AASHTO PP 78 design considerations.
 - iii. Superpave Mixtures with CRCG: CRCG may be used solely in HMA S1 mixtures. One percent (1%) of hydrated lime, or other accepted non-stripping agent, shall be added to all mixtures containing CRCG. CRCG material shall not be used with any other recycling option.
- (b) Basis of Approval: The following information must be included in the JMF submittal:
- i. Gradation, consensus properties and specific gravities of the aggregate, RAP or RAS.
 - ii. Average asphalt content of the RAP or RAS by AASHTO T 164.
 - iii. Source of RAP or RAS and percentage to be used.
 - iv. Warm mix Technology, manufacturer's recommended additive rate and tolerances, and manufacturer recommended mixing and compaction temperatures.
 - v. TSR test report and anti-strip manufacturer and recommended dosage rate if applicable.
 - vi. Mixing and compaction temperature ranges for the mix with and without the warm-mix technology incorporated.
 - vii. JMF ignition oven correction factor by AASHTO T 308.

With each JMF submittal, the following samples shall be submitted to the Division of Materials Testing:

- 4 - one (1) quart cans of PG binder, with corresponding Safety Data Sheet (SDS)
- 1 - 50 lbs. bag of RAP
- 2 - 50 lbs. bags of Plant-blended virgin aggregate

A JMF may not be approved if any of the properties of the aggregate components or mix do not meet the verification tolerances as described in the Department's current QA Program for Materials, Acceptance and Assurance Testing Policies and Procedures.

Any material based on a JMF, once approved, shall only be acceptable for use when it is produced by the designated Plant, it utilizes the same components, and the production of material continues to meet all criteria as specified in Tables M.04.02-2, M.04.02-3 and M.04.02-4. A new JMF must be submitted to the Engineer for approval whenever a new component source is proposed.

Only 1 mix with 1 JMF will be approved for production at a time. Switching between approved JMF mixes with different component percentages or sources of supply is prohibited.

TABLE M.04.02-2: Superpave Master Range for Bituminous Concrete Mixture Design Criteria

Sieve	S0.25		S0.375		S0.5		S1	
	Control Points		Control Points		Control Points		Control Points	
inches	Min (%)	Max (%)	Min (%)	Max (%)	Min (%)	Max (%)	Min (%)	Max (%)
2.0	-	-	-	-	-	-	-	-
1.5	-	-	-	-	-	-	100	-
1.0	-	-	-	-	-	-	90	100
3/4	-	-	-	-	100	-	-	90
1/2	100	-	100	-	90	100	-	-
3/8	97	100	90	100	-	90	-	-
No. 4	72	90	-	72	-	-	-	-
No. 8	32	67	32	67	28	58	19	45
No. 16	-	-	-	-	-	-	-	-
No. 30	-	-	-	-	-	-	-	-
No. 50	-	-	-	-	-	-	-	-
No. 100	-	-	-	-	-	-	-	-
No. 200	2.0	10.0	2.0	10.0	2.0	10.0	1.0	7.0
VMA (%)	16.5 ± 1		16.0 ± 1		15.0 ± 1		13.0 ± 1	
VA (%)	4.0 ± 1		4.0 ± 1		4.0 ± 1		4.0 ± 1	
Gse	JMF value		JMF value		JMF value		JMF value	
Gmm	JMF ± 0.030		JMF ± 0.030		JMF ± 0.030		JMF ± 0.030	
Dust / effective binder	0.6 - 1.2		0.6 - 1.2		0.6 - 1.2		0.6 - 1.2	
TSR	≥ 80%		≥ 80%		≥ 80%		≥ 80%	
T-283 Stripping	Minimal as determined by the Engineer							

(c) Mix Status: Each facility will have each type of bituminous concrete mixture rated based on the results of the previous year of production. Mix status will be provided to each bituminous concrete Producer prior to the beginning of the paving season.

The rating criteria are based on compliance with Air Voids and Voids in Mineral Aggregate (VMA) as indicated in Table M.04.03-4 and are calculated as follows:

Criteria A: Percentage of acceptance test results with compliant air voids.

Criteria B: The average of the percentage of acceptance results with compliant VMA and the percentage of acceptance results with compliant air voids.

The final rating assigned will be the lower of the rating obtained with Criteria A or Criteria B.

Mix status is defined as:

“A” – Approved: Assigned to each mixture type from a production facility with a current rating of 70% or greater, or to each mixture type completing a successful PPT.

“PPT” – Pre-Production Trial: Temporarily assigned to each mixture type from a production facility when:

1. there are no compliant acceptance production test results submitted to the Department from the previous year;
2. there is a source change in one or more aggregate components;
3. there is a component percentage change of more than 5% by weight;
4. there is a change in RAP percentage;
5. the mixture has a rating of less than 70% from the previous season;
6. it is a new JMF not previously submitted; or
7. the average of 10 consecutive acceptance results for VFA, Density to N_{ini} or dust to effective binder ratio does not meet the criteria in tables M.04.02-2 and M.04.02-4.

Bituminous concrete mixtures rated with a “PPT” status cannot be used on Department projects. Testing shall be performed by the Producer with NETTCP certified personnel on material under this status. Test results must confirm that specification requirements in Tables M.04.02-2 through M.04.02-4 are met and the binder content (Pb) meets the requirements in Table M.04.03-2 before material can be used. One of the following methods must be used to verify the test results:

Option A: Schedule a day when a Department Inspector can be at the facility to witness testing

Option B: When the Contractor or their representative performs testing without being witnessed by an Inspector, the Contractor shall submit the test results and a split sample including 2 gyratory molds, 5,000 grams of boxed bituminous concrete, and 5,000 grams of cooled loose bituminous concrete for verification testing and approval

Option C: When the Contractor or their representative performs testing without being witnessed by a Department Inspector, the Engineer may verify the mix in the Contractor’s laboratory

Witnessing or verifying by the Department of compliant test results will change the mix’s status to “A”

The differences between the Department’s test results and the Contractor’s must be within the “C” tolerances included in the [Department’s QA Program for Materials, Acceptance and Assurance Testing Policies and Procedures](#) in order to be verified.

“U” – Not Approved: Status assigned to a type of mixture that does not have an approved JMF. Bituminous concrete mixtures with a “U” status cannot be used on Department projects.

**TABLE M.04.02-3:
Superpave Consensus Properties Requirements for Combined Aggregate**

Traffic Level	Design ESALs (80kN) Millions	Coarse Aggregate Angularity ⁽¹⁾	Fine Aggregate Angularity AASHTO T 304, Method A Minimum %	Flat and Elongated Particles ⁽²⁾ ASTM D4791, Maximum %	Sand Equivalent AASHTO T 176, Minimum %
		ASTM D5821, Minimum %			
1	< 0.3	55/- -	40	10	40
2	0.3 to < 3.0	75/- -	40	10	40
3	≥ 3.0	95/90	45	10	45

Notes:
⁽¹⁾ 95/90 denotes that a minimum of 95% of the coarse aggregate, by mass, shall have one fractured face and that a minimum of 90% shall have two fractured faces.
⁽²⁾ Criteria presented as maximum Percent by mass of flat and elongated particles of materials retained on the No. 4 sieve, determined at 5:1 ratio.

TABLE M.04.02-4: Superpave Traffic Levels and Design Volumetric Properties

Traffic Level	Design ESALs (million)	Number of Gyration by Superpave Gyratory Compactor			Percent Density of Gmm from HMA/WMA Specimen			Voids Filled with Asphalt (VFA) Based on Nominal Mix Size - Inch			
		N _{ini}	N _{des}	N _{max}	N _{ini}	N _{des}	N _{max}	0.25	0.375	0.5	1
1	<0.3	6	50	75	≤91.5	96.0	≤98.0	70-80	70-80	70-80	67-80
2	0.3 to <3.0	7	75	115	≤90.5	96.0	≤98.0	65-78	65-78	65-78	65-78
3	≥3.0	7	75	115	≤90.0	96.0	≤98.0	65-77	65-76	65-75	65-75

**TABLE M.04.02-5:
Superpave Minimum Binder Content by Mix Type and Level**

Mix Type	Level	Binder Content Minimum
S0.25	1	5.80
S0.25	2	5.70
S0.25	3	5.70
S0.375	1	5.70
S0.375	2	5.60
S0.375	3	5.60
S0.5	1	5.10
S0.5	2	5.00
S0.5	3	5.00
S1	1	4.60
S1	2	4.50
S1	3	4.50

M.04.03—Production Requirements:

1. Standard Quality Control Plan (QCP) for Production: The QCP for production shall describe the organization and procedures, which the Contractor shall use to administer quality control. The QCP shall include the procedures used to control the production process, to determine when immediate changes to the processes are needed, and to implement the required changes. The QCP must detail the inspection, sampling and testing protocols to be used, and the frequency for each.

Control Chart(s) shall be developed and maintained for critical aspect(s) of the production process as determined by the Contractor. The control chart(s) shall identify the material property, applicable upper and lower control limits, and be updated with current test data. As a minimum, the following quality characteristics shall be included in the control charts:

- percent passing No. 4 sieve
- percent passing No. 200 sieve
- binder content
- air voids
- Gmm
- Gse
- VMA

The control chart(s) shall be used as part of the quality control system to document variability of the bituminous concrete production process. The control chart(s) shall be submitted to the Engineer the first day of each month.

The QCP shall also include the name and qualifications of a Quality Control Manager. The Quality Control Manager shall be responsible for the administration of the QCP, including compliance with the plan and any plan modifications.

The Contractor shall submit complete production testing records to the Engineer within 24 hours in a manner acceptable to the Engineer.

The QCP shall also include the name and qualifications of any outside testing laboratory performing any QC functions on behalf of the Contractor. The QCP must also include a list of sampling and testing methods and frequencies used during production, and the names of all Quality Control personnel and their duties.

Approval of the QCP does not imply any warranty by the Engineer that adherence to the plan will result in production of bituminous concrete that complies with these specifications. The Contractor shall submit any changes to the QCP as work progresses.

2. Acceptance Requirements:

(a) General:

A NETTCP HMA Paving Inspector certified Contractor representative shall obtain a field sample of the material placed at the project site in accordance with AASHTO T 168 using the procedure indicated in Section 5.2.3 or an alternate procedure approved by the Engineer. The field sample shall be quartered by the Contractor in accordance with AASHTO R 47 and placed in an approved container. The container shall be sealed with a security tape provided by the Department and labelled to include the project number, date of paving, mix type, lot and subplot numbers and daily tonnage. The minimum weight of each quartered sample shall be 14000 grams. The Contractor shall transport one of the containers to the Departments Central Laboratory in Rocky Hill, retain one of the containers for potential use in dispute resolution and test the remaining material for acceptance.

The Contractor shall submit all acceptance tests results to the Engineer within 24 hours or prior to the next day's production. All acceptance test specimens and supporting documentation must be retained by the Contractor and may be disposed of with the approval of the Engineer. All quality control specimens shall be clearly labeled and separated from the acceptance specimens.

Contractor personnel performing QC and acceptance testing must be present at the facility prior to, during, and until completion of production, and be certified as a NETTCP HMA Plant Technician or Interim HMA Plant Technician and be in good standing. Production of material for use on State projects must be suspended by the Contractor if such personnel are not present. Technicians found by the Engineer to be non-compliant with NETTCP policies and procedures or Department policies may be removed by the Engineer from participating in the acceptance testing process for Department projects until their actions can be reviewed.

Verification and dispute resolution testing will be performed by the Engineer in accordance with the Department's QA Program for Materials.

Should the Department be unable to validate the Contractor's acceptance test result(s) for a lot of material, the Engineer will use results from verification testing and re-calculate the pay adjustment for that lot. The Contractor may request to initiate the dispute resolution process in writing within 24 hours of receiving the adjustment and must include supporting documentation or test results to justify the request.

(b) Curb Mix Acceptance Sampling and Testing Procedures: Curb Mixes shall be tested by the Contractor at a frequency of 1 test per every 250 tons of cumulative production, regardless of the day of production.

When these mix designs are specified, the following acceptance procedures and AASHTO test methods shall be used:

TABLE M.04.03-1: Curb Mix Acceptance Test Procedures

Protocol	Reference	Description
1	AASHTO T 30(M)	Mechanical Analysis of Extracted Aggregate
2	AASHTO T 168	Sampling of Bituminous Concrete
3	AASHTO T 308	Binder Content by Ignition Oven Method (adjusted for aggregate correction factor)
4	AASHTO T 209(M)⁽²⁾	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
5	AASHTO T 312⁽²⁾	⁽¹⁾ Superpave Gyrotory Molds Compacted to N _{des}
6	AASHTO T 329	Moisture Content of Hot-Mix Asphalt (HMA) by Oven Method

Notes: ⁽¹⁾ One (1) set equals 2 each of 6-inch molds. Molds to be compacted to 50 gyrations.
⁽²⁾ Once per year or when requested by the Engineer.

i. Determination of Off-Test Status:

1. Curb Mix is considered “off test” when the test results indicate that any single value for bitumen content or gradation are not within the tolerances shown in Table M.04.02-1 for that mixture. If the mix is “off test,” the Contractor must take immediate actions to correct the deficiency and a new acceptance sample shall be tested on the same day or the following day of production.
2. When multiple silos are located at 1 site, mixture supplied to 1 project is considered as coming from 1 source for the purpose of applying the “off test” status.
3. The Engineer may cease supply from the Plant when test results from 3 consecutive samples are not within the JMF tolerances or the test results from 2 consecutive samples not within the control points indicated in Table M.04.02-1 regardless of production date.

ii. JMF Revisions

1. If a test indicates that the bitumen content or gradation are outside the tolerances, the Contractor may make a single JMF revision as allowed by the Engineer prior to any additional testing. Consecutive test results outside the requirements of Table M.04.02-1 JMF tolerances may result in rejection of the mixture.
2. Any modification to the JMF shall not exceed 50% of the JMF tolerances indicated in Table M.04.02-1 for any given component of the mixture without approval of the Engineer. When such an adjustment is made to the bitumen, the corresponding production percentage of bitumen shall be revised accordingly.

(c) Superpave Mix Acceptance:

i. Sampling and Testing Procedures

Production Lot: The lot will be defined as one of the following types:

- Non-PWL Production Lot for total estimated Project quantities per mixture less than 3500 tons: All mixture placed during a single continuous paving operation.
- PWL Production Lot for total estimated Project quantities per mixture of 3500 tons or more: Each 3500 tons of mixture produced within 30 calendar days.

Production Sub Lot:

- For Non-PWL: As defined in Table M.04.03-2
- For PWL: 500 tons (The last sub lot may be less than 500 tons.)

Partial Production Lots (For PWL only): A Lot with less than 3500 tons due to:

- completion of the course;
- a Job Mix Formula revision due to changes in:
 - o cold feed percentages over 5%,
 - o target combined gradation over 5%,
 - o target binder over 0.15%,
 - o any component specific gravity; or
- a lot spanning 30 calendar days.

The acceptance sample(s) location(s) shall be selected using stratified - random sampling in accordance with ASTM D3665 based on:

- the total daily estimated tons of production for non-PWL lots, or
- the total size for PWL lots.

One (1) acceptance sample shall be obtained and tested per sub lot with quantities over 125 tons. The Engineer may direct that additional acceptance samples be obtained. For non-PWL lots, one (1) acceptance test shall always be performed in the last sub lot based on actual tons of material produced.

For non-PWL lots, quantities of the same mixture per Plant may be combined daily for multiple State projects to determine the number of sub lots.

The payment adjustment will be calculated as described in 4.06.

TABLE M.04.03-2:

Superpave Acceptance Testing Frequency per Type/Level/Plant for Non-PWL Lots

Daily Quantity Produced in Tons (Lot)	Number of Sub Lots/Tests
0 to 125	0, Unless requested by the Engineer
126 to 500	1
501 to 1,000	2
1,001 to 1,500	3
1,500 or greater	1 per 500 tons or portions thereof

The following test procedures shall be used for acceptance:

TABLE M.04.03-3: Superpave Acceptance Testing Procedures

Protocol	Procedure	Description
1	AASHTO T 168	Sampling of bituminous concrete
2	AASHTO R 47	Reducing samples to testing size
3	AASHTO T 308	Binder content by ignition oven method (adjusted for aggregate correction factor)
4	AASHTO T 30(M)	Gradation of extracted aggregate for bituminous concrete mixture
5	AASHTO T 312	⁽¹⁾ Superpave gyratory molds compacted to N_{des}
6	AASHTO T 166	⁽²⁾ Bulk specific gravity of bituminous concrete
7	AASHTO R 35	⁽²⁾ Air voids, VMA
8	AASHTO T 209(M)	Maximum specific gravity of bituminous concrete (average of 2 tests)
9	AASHTO T 329	Moisture content of bituminous concrete

Notes: ⁽¹⁾ One (1) set equals 2 each of 6-inch molds. Molds to be compacted to N_{max} for PPTs and to N_{des} for production testing. The first sub lot of the year shall be compacted to N_{max} .

⁽²⁾ Average value of 1 set of 6-inch molds.

If the average ignition oven corrected binder content differs by 0.3% or more from the average of the Plant ticket binder content in 5 consecutive tests regardless of the production date (moving average), the Contractor shall immediately investigate, determine an assignable cause, and correct the issue. When 2 consecutive moving average differences are 0.3% or more and no assignable cause has been established, the Engineer may require a new ignition oven aggregate correction factor to be performed or to adjust the current factor by the average of the differences between the corrected binder content and production Plant ticket for the last 5 acceptance results.

The Contractor shall perform TSR testing within 30 days after the start of production for all design levels of HMA- and PMA- S0.5 Plant-produced mixtures, in accordance with AASHTO T 283(M). The TSR test shall be performed at an AMRL certified laboratory by NETTCP certified technicians. The compacted specimens may be fabricated at the Plant and then tested at an AMRL accredited facility. A minimum of 45000 grams of plant blended mixture and the corresponding complete Form MAT-412s shall be submitted to the DMT for production TSR testing verification. The mixture submitted shall be representative of the corresponding mix design as determined by the Engineer. Additionally, the TSR test report and tested specimens shall be submitted to the Engineer for review. Superpave mixtures that require anti-strip additives (either liquid or mineral) shall continue to meet all requirements specified herein for binder and bituminous concrete. The Contractor shall submit the name, manufacturer, percent used, technical datasheet and SDS for the anti-strip additive (if applicable) to the Engineer.

i. Determination of Off-Test Status:

1. Superpave mixes shall be considered “*off test*” when any control point sieve, binder content, VA, VMA, and Gmm value is outside of the limits specified in Table M.04.03-4 or the target binder content at the Plant is below the minimum binder

content stated in Table M.04.02-5. Note that further testing of samples or portions of samples not initially tested for this purpose cannot be used to change the status.

2. Any time the bituminous concrete mixture is considered off-test:
 - A. The Contractor shall notify the Engineer when the Plant is “*off test*” for any mix design that is delivered to the Project in any production day. When multiple silos are located at 1 site, mixture supplied to 1 project is considered as coming from 1 source for the purpose of applying the “*off test*” determination.
 - B. The Contractor must take immediate actions to correct the deficiency, minimize “*off test*” production to the Project, and obtain an additional Process Control (PC) test after any corrective action to verify production is in conformance with the specifications. A PC test will not be used for acceptance and is solely for the use of the Contractor in its quality control process.

ii. Cessation of Supply for Superpave Mixtures in Non-PWL Lots:

A mixture **shall not be used** on Department projects when it is “off test” for:

1. four (4) consecutive tests in any combination of VA, VMA or Gmm, regardless of date of production, or
2. two (2) consecutive tests in the control point sieves in 1 production shift.

As a result of cessation of supply, the mix status will be changed to PPT

iii. JMF revisions:

JMF revisions are only permitted prior to or after a production shift. A JMF revision is effective from the time it was submitted and is not retroactive to the previous test(s).

JMF revisions shall be justified by a documented trend of test results.

Revisions to aggregate or RAP specific gravities are only permitted when testing is performed at an AMRL certified laboratory by NETTCP certified technicians.

A JMF revision is required when the Plant target RAP or bin percentage deviates by more than 5% or the Plant target binder content deviates by more than 0.15% from the active JMF.

TABLE M.04.03-4: Superpave Mixture Production Requirements

	S0.25		S0.375		S0.5		S1		Tolerances
Sieve	Control Points		Control Points		Control Points		Control Points		From JMF Targets ⁽²⁾
inches	Min (%)	Max (%)	Min (%)	Max (%)	Min (%)	Max (%)	Min (%)	Max (%)	+/- Tolerance
1.5	-	-	-	-	-	-	100	-	
1.0	-	-	-	-	-	-	90	100	
3/4	-	-	-	-	100	-	-	90	
1/2	100	-	100	-	90	100	-	-	
3/8	97	100	90	100	-	90	-	-	
No. 4	72	90	-	72	-	-	-	-	
No. 8	32	67	32	67	28	58	19	45	
No. 16	-	-	-	-	-	-	-	-	
No. 200	2.0	10.0	2.0	10.0	2.0	10.0	1.0	7.0	
Pb	JMF value		JMF value		JMF value		JMF value		0.3 ⁽³⁾
VMA (%)	16.5		16.0		15.0		13.0		1.0 ⁽⁴⁾
VA (%)	4.0		4.0		4.0		4.0		1.0 ⁽⁵⁾
Gmm	JMF value		JMF value		JMF value		JMF value		0.030
Mix Temp. – HMA ⁽⁶⁾	265-325°F ⁽¹⁾		265-325°F ⁽¹⁾		265-325°F ⁽¹⁾		265-325°F ⁽¹⁾		
Mix Temp. – PMA ⁽⁶⁾	285-335°F ⁽¹⁾		285-335°F ⁽¹⁾		285-335°F ⁽¹⁾		285-335°F ⁽¹⁾		
Prod. TSR	N/A		N/A		≥80%		N/A		
T-283 Stripping	N/A		N/A		Minimal TBD by the Engineer		N/A		

Notes: ⁽¹⁾ 300°F minimum after October 15.

⁽²⁾ JMF tolerances shall be defined as the limits for production compliance.

⁽³⁾ 0.4 for PWL lots

⁽⁴⁾ 1.3 for all PWL lots except S/P 0.25 mixes. 1.1 for S/P 0.25 Non-PWL lots. 1.4 for S/P 0.25 PWL lots

⁽⁵⁾ 1.2 for PWL lots

⁽⁶⁾ Also applies to placement

**Table M.04.03-5:
Modifications to Standard AASHTO and ASTM Test Specifications and Procedures**

AASHTO Standard Method of Test	
Reference	Modification
T 30	Section 7.2 through 7.4 Samples are not routinely washed for production testing
T 209	Section 7.2 The average of 2 bowls is used proportionally in order to satisfy minimum mass requirements. 8.3 Omit Pycnometer method.
T 283	When foaming technology is used, the material used for the fabrication of the specimens shall be cooled to room temperature, and then reheated to the manufacturer's recommended compaction temperature prior to fabrication of the specimens.
AASHTO Standard Recommended Practices	
Reference	Modification
R 26	<p>All laboratory technician(s) responsible for testing PG binders shall be certified or Interim Qualified by NETTCP as a PG Asphalt Binder Lab Technician.</p> <p>All laboratories testing binders for the Department are required to be accredited by the AMRL.</p> <p>Sources interested in being approved to supply PG binders to the Department by use of an "in-line blending system" must record properties of blended material and additives used.</p> <p>Each source of supply of PG binder must indicate that the binders contain no additives used to modify or enhance their performance properties. Binders that are manufactured using additives, modifiers, extenders, etc., shall disclose the type of additive, percentage and any handling specifications or limitations required.</p> <p>All AASHTO M 320 references shall be replaced with AASHTO M 332.</p> <p>Once a month, 1 split sample and test results for each asphalt binder grade and each lot shall be submitted by the PG binder supplier to the Department's Central Lab. Material remaining in a certified lot shall be re-certified no later than 30 days after initial certification. Each April and September, the PG binder supplier shall submit test results for 2 BBR tests at 2 different temperatures in accordance with AASHTO R 29.</p>

SECTION M.06 - METALS

Section M.06 is amended as follows:

M.06.01—Reinforcing Steel:

Delete the entire last paragraph in Subarticle 1 "Bar Reinforcement" that reads: "Prior to the incorporation... ..and type of bar reinforcement."

M.06.02—Structural Steel:

Revise Subarticle 2 "Anchor Bolts" as follows:

"(a) Anchor bolt assemblies shall meet the requirements of ASTM F1554, and the grade shall be as specified on the plans. All components of the bolt assembly shall be galvanized in accordance with ASTM F2329."

Replace Subarticle 3 "High Strength Bolts" with the following:

" **3. High-Strength Bolts:** High-strength bolts, including suitable nuts and hardened washers, shall meet the following requirements:

- (a) High-strength bolts shall meet the requirements of ASTM F3125 Grade A325 or ASTM F3125 Grade A490 as shown on the plans. High-strength bolts used with coated steel shall be mechanically galvanized, unless otherwise specified. High-strength bolts used with uncoated weathering grades of steel shall be Type 3.

Nuts for ASTM F3125 Grade A325 bolts shall meet the requirements of ASTM A563, Grades DH, DH3, C, C3 and D. Where galvanized high-strength bolts are used, the nuts shall be galvanized, heat-treated Grade DH. Where Type 3 high-strength bolts are used, the nuts shall be Grade C3 or DH3.

Nuts for ASTM F3125 Grade A490 bolts shall meet the requirements of ASTM A563, Grade DH. Where Type 3 high-strength bolts are used, the nuts shall be Grade DH3.

All galvanized nuts shall be lubricated with a lubricant containing a visible dye of any color that contrasts with the color of the galvanizing. Black bolts must be oily to the touch when delivered and installed.

Circular flat and square or rectangular beveled, hardened steel washers shall meet the requirements of ASTM F436. Unless otherwise specified, galvanized washers shall be furnished when galvanized high-strength bolts are specified, and washers with atmospheric corrosion resistance and weathering characteristics shall be furnished when Type 3 high-strength bolts are specified.

Compressible-washer-type direct tension indicator washers, used in conjunction with high-strength bolts, shall meet the requirements of ASTM F959. Where galvanized high-strength bolts are used, the washers shall be galvanized in accordance with ASTM B695,

Class 55. Where Type 3 high-strength bolts are used, the washers shall be galvanized in accordance with ASTM B695, Class 55 and coated with epoxy.

- (b) Identifying Marks:** ASTM F3125 Grade A325 for bolts and the specifications referenced therein for nuts require that bolts and nuts manufactured to the specification be identified by specific markings on the top of the bolt head and on one face of the nut. Markings may be raised or depressed at the manufacturer's option and shall be visible after coating if coating is required. Head markings must identify the grade by the symbol "A325," the manufacturer and the type, if Type 3. Nut markings must identify the grade, the manufacturer and if Type 3, the type. Markings on direct tension indicators must identify the manufacturer and Type "A325." Other washer markings must identify the manufacturer and if Type 3, the type.

ASTM F3125 Grade A490 for bolts and the specifications referenced therein for nuts require that bolts and nuts manufactured to the specifications be identified by specific markings on the top of the bolt head and on one face of the nut. Markings may be raised or depressed at the manufacturer's option and shall be visible after coating if coating is required. Head markings must identify the grade by the symbol "A490," the manufacturer and the type, if Type 3. Nut markings must identify the grade, the manufacturer and if Type 3, the type. Markings on direct tension indicators must identify the manufacturer and Type "A490." Other washer markings must identify the manufacturer and if Type 3, the type.

ASTM F3125 Grade A325 and ASTM F3125 Grade A490 bolt lengths up to 4 times the diameter which are fully threaded but which are not required to be fully threaded by the relevant ASME standard shall be marked with a "T" immediately after the grade designation, for example "A325T." Bolts with any other non-standard dimensions, including thread length, shall be marked with an "S" immediately after the grade designation, for example "A325S." All other markings, if used, such as a private label distributor's mark shall also be separate and distinct.

- (c) Dimensions:** Bolt and nut dimensions shall meet the requirements for Heavy Hexagon Structural Bolts and for Heavy Semi-Finished Hexagon Nuts given in ASME Standard B18.2.6.
- (d) Galvanized Bolts:** Galvanized bolts shall meet the requirements of ASTM F3125 Grade A325, Type 1. The bolts shall be hot-dip galvanized in accordance with ASTM F2329, to a thickness of 50 μm or mechanically galvanized in accordance with ASTM B695, Class 55. Bolts, nuts, and washers of any assembly shall be galvanized by the same process. The nuts shall be overtapped to the minimum amount required for the fastener assembly, and shall be lubricated with a lubricant containing a visible dye so a visual check can be made for the lubricant at the time of field installation. Galvanized bolts shall be tension tested after galvanizing. ASTM F3125 Grade A490 bolts shall be uncoated or shall be coated in accordance with either ASTM F1136 Grade 3 or ASTM F2833 Grade 1.
- (e) Test Requirements:** The maximum hardness of ASTM F3125 Grade A325 bolts shall be 34 HRC. The maximum hardness of ASTM F3125 Grade A490 bolts shall be 38 HRC. Plain, ungalvanized nuts shall have a minimum hardness of 89 HRB.

Proof load tests, in accordance with the requirements of ASTM F606 Method 1, shall be required for the bolts. Wedge tests of full-size bolts are required in accordance with Section 10.1 of ASTM F3125. Galvanized bolts shall be wedge tested after galvanizing.

Proof load tests of ASTM A563 are required for nuts. Proof load tests for nuts used with galvanized bolts shall be performed after galvanizing, overtapping and lubricating.

Rotational-capacity tests are required and shall be performed on all plain or galvanized (after galvanizing) bolt, nut and washer assemblies by the manufacturer or distributor prior to shipping and by the Contractor at the Site.

The thickness of galvanizing on bolts, nuts and washers shall be measured. On bolts, it shall be measured on the wrench flats or on top of the bolt head, and on nuts it shall be measured on the wrench flats.

- (f) Certified Test Reports and Materials Certificates:** The Contractor shall submit notarized copies of Certified Test Reports and Materials Certificates in accordance with Article 1.06.07 for fastener assemblies. In addition the Certified Test Reports and Materials Certificates shall include the following:
1. Mill test reports shall indicate the place where the material was melted and manufactured.
 2. Test reports for proof load tests, wedge tests, and rotational-capacity tests shall indicate where the tests were performed, date of tests, location of where the components were manufactured and lot numbers.
 3. The test report for galvanized components shall indicate the thickness of the galvanizing.
- (g) Material Samples:** Prior to incorporation into the work, the Contractor shall submit samples of the bolt assemblies to the Engineer for testing in accordance with the latest edition of the "[Materials Testing Manual](#) (Chapter 8, Minimum Schedule for Acceptance Testing)." Samples shall be submitted for each diameter, length, material designation, grade, coating and manufacturer of bolt assembly."

M.06.03—Galvanizing:

Replace the entire subarticle with the following:

" **M.06.03—Galvanizing:** Unless otherwise specified on the plans or in the special provisions, the zinc coating on all iron and steel materials, other than wire, shall meet the requirements of ASTM A123, A153 or F2329, whichever shall apply.

When mechanical galvanizing is used it shall meet the requirements of ASTM B695 Class 55."

ITEM #0201001A – CLEARING & GRUBBING

Work under this item shall conform to the requirements of Section 2.01 amended as follows:

Description: Add the following:

Also included in this item is the removal and disposal of existing sidewalk as designated on the plans east of Prospect Street. This sidewalk is outside the excavation limits for new sidewalk.

ITEM #0406275A - FINE MILLING OF BITUMINOUS CONCRETE (0 TO 4 INCHES)

Description: This work shall consist of the milling, removal, and disposal of existing bituminous concrete pavement.

Construction Methods: The Contractor shall remove the bituminous concrete material using means acceptable to the Engineer. The pavement surface shall be removed to the line, grade, and existing or typical cross-section shown on the plans or as directed by the Engineer.

The bituminous concrete material shall be disposed of offsite by the Contractor to the following as directed by the Town:

- Location(s) within the Town of Colchester within a 5 mile radius of the site as directed by the Town or;
- To an approved disposal facility as chosen by the Contractor.

Any milled surface, or portion thereof, that is exposed to traffic shall be paved within five (5) calendar days unless otherwise stated in the plans or Contract.

The equipment for milling the pavement surface shall be designed and built for milling bituminous concrete pavements. It shall be self propelled with sufficient power, traction, and stability to maintain depth and slope and shall be capable of removing the existing bituminous concrete pavement.

The milling machine shall be equipped with a built-in automatic grade averaging control system that can control the longitudinal profile and the transverse cross-slope to produce the specified results. The longitudinal controls shall be capable of operating from any longitudinal grade reference, including string line, contact ski (30 feet minimum), non-contact ski (20 feet minimum), or mobile string line (30 feet minimum). The transverse controls shall have an automatic system for controlling cross-slope at a given rate. The Engineer may waive the requirement for automatic grade or slope controls where the situation warrants such action.

The machine shall be able to provide a 0 to 4 inch deep cut in one pass. The rotary drum of the machine shall use carbide or diamond tipped tools spaced not more than $\frac{5}{16}$ inch apart. The forward speed of the milling machine shall be limited to no more than 45 feet/minute. The tools on the revolving cutting drum must be continually maintained and shall be replaced as warranted to provide a uniform pavement texture.

The machine shall be equipped with an integral pickup and conveying device to immediately remove material being milled from the surface of the roadway and discharge the millings into a truck, all in one operation. The machine shall also be equipped with a means of effectively limiting the amount of dust escaping from the milling and removal operation.

When milling smaller areas or areas where it is impractical to use the above described equipment, the use of a lesser equipped milling machine may be permitted when approved by the Engineer.

Protection shall be provided around existing catch basin inlets, manholes, utility valve boxes, and any similar structures. Any damage to such structures as a result of the milling operation is the Contractor's responsibility and shall be repaired at the Contractor's expense.

To prevent the infiltration of milled material into the storm drainage system, the Contractor shall take special care to prevent the milled material from falling into the inlet openings or inlet grates. Inlet protection shall be provided at all catch basin within the project area. Any milled material that has fallen into inlet openings or inlet grates shall be removed at the Contractor's expense.

Surface Tolerance: The milled surface shall provide a satisfactory riding surface with a uniform textured appearance. The milled surface shall be free from gouges, longitudinal grooves and ridges, oil film, and other imperfections that are a result of defective equipment, improper use of equipment, or poor workmanship. The Contractor, under the direction of the Inspector, shall perform random spot-checks with a Contractor supplied ten-foot straightedge to verify surface tolerances at a minimum of five (5) locations per day. The variation of the top of two ridges from the testing edge of the straightedge, between any two ridge contact points, shall not exceed $\frac{1}{4}$ inch. The variation of the top of any ridge to the bottom of the groove adjacent to that ridge shall not exceed $\frac{1}{4}$ inch. Any unsatisfactory surfaces produced are the responsibility of the Contractor and shall be corrected at the Contractor's expense and to the satisfaction of the Engineer.

The depth of removal will be verified by taking measurements every 250 feet per each pass of the milling machine, or as directed by the Engineer. These depth measurements shall be used to monitor the average depth of removal.

Where a surface delamination between bituminous concrete layers or a surface delamination of bituminous concrete on Portland cement concrete causes a non-uniform texture to occur, the depth of milling shall be adjusted in small increments to a maximum of $\pm \frac{1}{2}$ inch to eliminate the condition.

When removing bituminous concrete pavement entirely from an underlying Portland cement concrete pavement, all of the bituminous concrete pavement shall be removed leaving a uniform surface of Portland cement concrete, unless otherwise directed by the Engineer.

Any unsatisfactory surfaces produced by the milling operation are the Contractor's responsibility and shall be corrected at the Contractor's expense and to the satisfaction of the Engineer.

No vertical faces, transverse or longitudinal, shall be left exposed to traffic unless the requirements below are met. This shall include roadway structures (catch basins, manholes, utility valve boxes, etc.). If any vertical face is formed in an area exposed to traffic, a temporary paved transition shall be established according to the requirements shown on the plans. If the milling machine is used to form a temporary transition, the length of the temporary transition shall conform to Special Provision Section 4.06 – Bituminous Concrete, "Transitions for Roadway Surface," the requirements shown on the plans, or as

directed by the Engineer. At all permanent limits of removal, a clean vertical face shall be established by saw cutting prior to paving.

Roadway structures shall not have a vertical face of greater than one (1) inch exposed to traffic as a result of milling. All structures within the roadway that are exposed to traffic and greater than one (1) inch above the milled surface shall receive a transition meeting the following requirements:

For roadways with a posted speed limit of 35 mph or less*:

1. Round structures with a vertical face of greater than 1 inch to 2.5 inches shall be transitioned with a hard rubber tapered protection ring of the appropriate inside diameter designed specifically to protect roadway structures.
2. Round structures with a vertical face greater than 2.5 inches shall receive a transition of bituminous concrete formed at a minimum 24 to 1 (24:1) taper in all directions.
3. All rectangular structures with a vertical face greater than 1 inch shall receive a transition of bituminous concrete formed at a minimum 24 to 1 (24:1) taper in all directions.

*Bituminous concrete tapers at a minimum 24 to 1 (24:1) taper in all directions may be substituted for the protection rings if approved by the Engineer.

For roadways with a posted speed limit of 40, 45 or 50 mph:

1. All structures shall receive a transition of bituminous concrete formed at a minimum 36 to 1 (36:1) taper in the direction of travel. Direction of travel includes both the leading and trailing side of a structure. The minimum taper shall be 24 to 1 (24:1) in all other directions.

For roadways with a posted speed limit of greater than 50 mph:

1. All structures shall receive a transition of bituminous concrete formed at a minimum 60 to 1 (60:1) taper in the direction of travel. Direction of travel includes both the leading and trailing side of a structure. The minimum taper shall be 24 to 1 (24:1) in all other directions.

All roadway structure edges and bituminous concrete tapers shall be clearly marked with fluorescent paint. The paint shall be maintained throughout the exposure to traffic.

The milling operation shall proceed in accordance with the requirements of the "Maintenance and Protection of Traffic" and "Prosecution and Progress" specifications, or other Contract requirements. The more stringent specification shall apply.

Prior to opening an area which has been milled to traffic, the pavement shall be thoroughly swept with a sweeper truck. The sweeper truck shall be equipped with a water tank and be capable of removing the millings and loose debris from the surface. The sweeper truck shall operate at a forward speed that allows for the maximum pickup of millings from the roadway surface. Other sweeping equipment may be provided in lieu of the sweeper truck where acceptable by the Engineer.

Any milled area that will not be exposed to live traffic for a minimum of 48 hours prior to paving shall require a vacuum sweeper truck in addition to, or in lieu of, mechanical sweeping. The vacuum sweeper truck shall have sufficient power and capacity to completely remove all millings from the roadway surface including any fine particles within the texture of the milled surface. Vacuum sweeper truck hose attachments shall be used to clean around pavement structures or areas that cannot be reached effectively by the main vacuum. Compressed air may be used in lieu of vacuum attachments if approved by the Engineer.

Method of Measurement: This work will be measured for payment by the number of square yards of area from which the milling of asphalt has been completed and the work accepted. No area deductions will be made for minor unmilled areas such as catch basin inlets, manholes, utility boxes and any similar structures.

Basis of Payment: This work will be paid for at the Contract unit price per square yard for "Fine Milling of Bituminous Concrete (0 to 4 Inches)." This price shall include all equipment, tools, labor, and materials incidental thereto.

No additional payments will be made for multiple passes with the milling machine to remove the bituminous surface.

No separate payments will be made for cleaning the pavement prior to paving; providing protection and doing handwork removal of bituminous concrete around catch basin inlets, furnishing and installing catch basin inlet protection, manholes, utility valve boxes and any similar structures; repairing surface defects as a result of the Contractors negligence; providing protection to underground utilities from the vibration of the milling operation; removal of any temporary milled or paved transition; removal and disposal of millings as directed; furnishing a sweeper truck and sweeping after milling. The costs for these items shall be included in the Contract unit price.

Pay Item
Fine Milling of Bituminous Concrete (0 to 4 Inches)

Pay Unit
S.Y.

ITEM #0506016A - PRECAST CONCRETE SEGMENTAL RETAINING WALL

Description:

This technical specification covers the furnishing of all labor, materials, tools, submittals testing and equipment necessary to construct and install segmental retaining walls (SRW) at locations indicated on the plans, in accordance with dimensions and details shown, or as directed by the Engineer. Removal and disposal of any existing abandoned water main in the area of the retaining wall excavation is included in this item.

Submittals:

- A. Wall Manufacturer Submittal: The Contractor shall submit the manufacturers' cut sheet of the wall style/color proposed for approval by the Town prior to proceeding with the wall design.
- B. Design Submittal: The Contractor shall submit two sets of detailed design calculations and final retaining wall plans for approval at least two weeks prior to the beginning of wall construction. All calculations and drawings shall be prepared and sealed by a Connecticut licensed professional Civil Engineer (P.E.) – (Wall Design Engineer) experienced in SRW design and shall be in accordance with acceptable engineering practice. The wall must be designed for vehicle loading in areas where guide railing is installed on top of the wall.

Materials:

SRW units shall be machine formed, Portland cement concrete blocks specifically designed for retaining wall applications with a textured/split-face finish. Color will be specified by the Town. Concrete SRW units shall conform to the requirements of ASTM 1372 and have a minimum net average 28 days compressive strength of 3000 psi. Exterior dimensions shall be uniform and consistent. Maximum dimensional deviations on the height of any two units shall be 0.125 in.

Geogrid products shall be of high density polyethylene or polyester yarns encapsulated in a protective coating specifically fabricated for use as a soil reinforcement material. The type, strength and placement of the geosynthetic reinforcement shall be determined and materials shall be specified by Wall Design Engineer in their final wall plans and specifications.

Any soil infill, base materials and backfill materials shall be as specified and required by the Wall Design Engineer.

Construction Methods:

The precast concrete block retaining walls shall be installed in the location and to the dimensions and details shown on the plans and in accordance with the final approved design stamped by the Wall Design Engineer and any manufacturer recommendations.

Method of Measurement:

Measurement for this item will be based on the number of Square Feet of exposed face of precast concrete segmental retaining wall in place and accepted.

Basis of Payment:

Payment for this item will be based on the unit price per Square Foot of precast concrete segmental retaining wall, installed and accepted, including all labor, materials and tools, including excavation, removal of abandoned water main, furnishing and installing all base, infill and backfill materials, design, submittals, testing, and equipment necessary to complete the work as specified.

ITEM #0586001.10A – TYPE “C” CATCH BASIN 0-10’ DEEP

ITEM #0586750A – TYPE “C” CATCH BASIN TOP

ITEM #0586760A – TYPE “C-L” CATCH BASIN TOP

**ITEM #0586790.10A – REMOVE DRAINAGE STRUCTURE – 0’-10’
DEEP**

Work under this item shall conform to the requirements of Section 5.86 amended as follows:

5.86.04 – Method of Measurement: Remove and replace with:

Manholes, Catch Basins and Drop Inlets will be measured as separate units.

Replacement of frames, covers, and tops will be measured as a unit for catch basin top or manhole frame and cover and shall also include resetting the top.

Removal of drainage structures will be measured as separate units and shall include any adjacent existing pipe removal.

There will be no measurement for drainage trench excavation required for the installation or removal of drainage pipes, catch basins, and other drainage structures, or any other incidental drainage work including materials, tools, equipment and labor necessary to complete the drainage trench excavation in conformity with the plans or as directed by the Engineer but shall be included in the Contract unit price for the type of structure being installed or removed.

There will be no measurement or direct payment for the application of the protective compound material, the cost of this work shall be considered as included in the general cost of the work.

There will be no measurement for cutting and removal of existing pipe or installation of any new pipe necessary for installation of new structures.

5.86.05 – Basis of Payment: Remove and replace with:

Drainage Trench Excavation There will be no direct payment for drainage trench excavation required for the installation or removal of drainage pipes, catch basins, and other drainage structures, or any other incidental drainage work including materials, tools, equipment and labor necessary to complete the drainage trench excavation in conformity with the plans or as directed by the Engineer but shall be included in the Contract unit price for the type of structure being installed or removed.

Manholes and Catch Basins will be paid for at the Contract unit price for each "Manhole," or "Catch Basin," of the type specified, at "0' to 10' Deep" or "0' to 20' Deep," complete in place, which price shall include all excavation, backfill, materials, equipment, tools and labor incidental thereto.

Frames, Covers, and Tops will be paid for at the Contract unit price each for such "(Type) Catch Basin Top", complete in place including excavation, all materials, equipment, tools and labor incidental thereto including, if necessary, all work to reset the top.

ITEM #0586001.10A,#0586750A,
#0586760A, #0586790.10A

The maximum change in elevation of frame under these items shall not exceed 3 feet. Greater depth changes, if required, shall be paid for as Extra Work, in accordance with 1.04.05.

Removal of drainage structures will be paid for at the Contract unit price each for "Remove Drainage Structure – 0' to 10' Deep," which price shall include excavation, cutting, removal and disposal of adjacent existing pipe to be removed, backfill, and all equipment, tools and labor incidental thereto.

There will be no direct payment for backfill or disposal of surplus material necessary for the satisfactory completion of this work.

There will be no direct payment made for shoring, bracing, dewatering, or for material or equipment necessary for the satisfactory completion of the work.

ITEM #0921001A – CONCRETE SIDEWALKS & RAMPS

Work under this item shall conform to the requirements of Section 9.21 amended as follows:

Remove all references to gravel or reclaimed miscellaneous aggregate base and replace with processed aggregate base.

9.21.02 – Materials: Remove the second sentence and replace with:

The base material, processed aggregate base, shall meet the requirements of M.05.01. Coarse aggregate shall be broken stone; gravel or reclaimed aggregate shall not be allowed.

Add: Steel reinforcement shall conform to Article M06.01.

9.21.04 – Method of Measurement:

1. Concrete Sidewalk or Sidewalk Ramp: Remove and replace with:

This work will be measured by the actual number of square feet of completed and accepted concrete sidewalk or concrete sidewalk – 8” thick.

2. Excavation: Remove and replace with:

Excavation below and above the finished grade of the sidewalk or ramp, backfilling and disposal of surplus material will not be measured for payment, but the cost shall be included in the price bid for the sidewalk or ramp. Topsoil excavated shall be stockpiled for reuse in accordance with special provision #0950020A Site Restoration and Seeding.

9.21.05 – Basis of Payment: Delete the first paragraph and replace with:

Construction of a concrete sidewalk or ramp will be paid for at the Contract unit price per square foot for “Concrete Sidewalk” or Concrete Sidewalk – 8” Thick” or “Integral Concrete Sidewalk” complete in place, which price shall include all excavation, backfill, removal and disposal of surplus material including any existing sidewalk and curbing removed, processed aggregate base, equipment, tools, materials and labor incidental thereto.

Replace pay items with:

Pay Item	Pay Unit
Concrete Sidewalk	S.F.
Concrete Sidewalk – 8” Thick	S.F.
Integral Concrete Sidewalk	S.F.
Detectable Warning Strip	EA.

ITEM #0950020A – SITE RESTORATION AND SEEDING

Description:

This work shall consist of regrading and shaping of slopes and other disturbed lawn areas to match with new sidewalk grades for the project limits as shown on the plans. Existing stockpiled topsoil shall be placed to a depth of 4 inches minimum. Also included in this item is providing an accepted stand of grass by furnishing and placing seed as shown on the plans. This item shall also include removal and disposal of excess and unsuitable material.

Materials:

The material shall be existing topsoil that has been excavated and stockpiled at the site.

The materials for turf establishment shall conform to the requirements of Form 817 Section 9.50. 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 Engineer.

<u>Percent by Weight</u>	<u>Common Name</u>	<u>Scientific Name</u>
25	Abbey Kentucky Bluegrass	Poa pratensis
15	Envicta Kentucky Bluegrass	Poa pratensis
25	Pennlawn Red Fescue	Festuca rubra
15	Ambrose Chewing Fescue	Festuca rubra
20	Manhattan Ryegrass	Lolium perenne

Construction Methods:

The area on both sides of the new sidewalk shall be graded to match into existing slopes, have topsoil placed and be seeded for new lawn turf establishment. The slope limits are shown on the plans and include two areas designated to regrade the existing slope to match into the sidewalk grades.

The areas on which topsoil is to be placed shall be graded to a reasonably true surface. Topsoil shall then be spread and shaped to the lines and grades shown on the plans, or as directed by the Engineer. The required depth to which the topsoil is to be placed is to be the depth after settlement of the material has taken place. All stones, roots, debris, sod, weeds and other undesirable material shall be removed. After shaping and grading, all trucks and other equipment shall be excluded from the finished areas to prevent excessive compaction. The Contractor shall perform such work as required to provide a friable surface for seed germination and plant growth prior to seeding.

During hauling and spreading operations, the Contractor shall immediately remove any material dumped or spilled on the sidewalks or pavement.

It shall be the Contractor's responsibility to restore to the line, grade and surface all eroded areas with approved material and to keep the finished areas in acceptable condition until the completion of the construction work.

Seeding shall be by methods 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.

Method of Measurement:

This work, being paid on a lump sum basis, will not be measured.

Basis of Payment:

Payment for this work will be made at the Contract lump sum price for "Site Restoration and Seeding" which price shall include all materials, equipment, tools, labor and work incidental to the completion of the work. Partial payment of up to 60% may be made for work completed, but not accepted.

ITEM #0971001A – MAINTENANCE AND PROTECTION OF TRAFFIC

Article 9.71.01 – Description is supplemented by the following:

The Contractor shall maintain and protect traffic as follows:

Halls Hill Road

During construction, Halls Hill Road will be open to traffic. The Contractor shall set up and maintain the scheme for maintenance of traffic acceptable to 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 allowed to close said driveways to perform the required work during those periods when the businesses are closed, unless permission is granted from the business owner to close the driveway during business hours. If a temporary closure of a residential driveway is necessary, the Contractor shall coordinate with the owner to determine the time period of the closure.

Article 9.71.03 Construction Method is supplemented as follows:

General

Unpaved travel paths will only be permitted for areas requiring full depth and full width reconstruction, in which case, the Contractor will be allowed to maintain traffic on processed aggregate for a duration not to exceed 10 calendar days. The unpaved section shall be the full width of the road and perpendicular to the travel lanes. Opposing traffic lane dividers shall be used as a centerline.

The Contractor is required to delineate any raised structures within the travel lanes, so that the structures are visible day and night, unless there are specific contract plans and provisions to temporarily lower these structures prior to the completion of work.

The Contractor shall schedule operations so that pavement removal and roadway resurfacing shall be completed full width across a roadway (bridge) section by the end of a workday (work night), or as directed by the Engineer.

When the installation of all intermediate courses of bituminous concrete pavement is completed for the entire roadway, the Contractor shall install the final course of bituminous concrete pavement.

When the Contractor is excavating adjacent to the roadway, the Contractor shall provide a 4-foot shoulder between the work area and travel lanes, with traffic drums spaced every 50 feet. At the end of the workday, if the vertical drop-off exceeds 3 inches, the Contractor shall provide a temporary traversable slope of 4:1 or flatter that is acceptable to the Engineer.

If applicable, when an existing sign is removed, it shall be either relocated or replaced by a new sign during the same working day.

The Contractor shall not store any material on-site which would present a safety hazard to motorists or pedestrians (e.g. fixed object or obstruct sight lines).

The field installation of a signing pattern shall constitute interference with existing traffic operations and shall not be allowed, except during the allowable periods.

All temporary concrete barriers, other protective systems and traffic control devices as called for by the contract or ordered by the Engineer must be on-hand and available in sufficient quantity for immediate installation prior to any stage change.

Existing Signing

The Contractor shall maintain all existing side-mounted signs throughout the project limits during the duration of the project. The Contractor shall temporarily relocate signs and sign supports as many times as deemed necessary, and install temporary sign supports if necessary and as directed by the Engineer.

Requirements for Winter

The Contractor shall schedule a meeting with representatives from the Town to determine what interim traffic control measures the Contractor shall accomplish for the winter to provide safety to the 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.

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 the safe and 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. 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 so as to command respect from the motorist.

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.

If a lane reduction taper is required to shift traffic, the entire length of the taper should be installed on a tangent section of roadway so that the entire taper area can be seen by the motorist.

Any existing signs that are in conflict with the traffic control patterns shall be removed, covered, or turned so that they are not readable by oncoming traffic.

When installing a traffic control pattern, a Buffer Area should be provided and this area shall be free of equipment, workers, materials and parked vehicles.

Typical traffic control plans 19 through 25 may be used for moving operations such as line striping, pot hole patching, mowing, or sweeping when it is necessary for equipment to occupy a travel lane.

Traffic control patterns will not be required when vehicles are on an emergency patrol type activity or when a short duration stop is made and the equipment can be contained within the shoulder. Flashing lights and appropriate trafficperson shall be used when required.

Although each situation must be dealt with individually, conformity with the typical traffic control plans contained herein is required. In a situation not adequately covered by the typical traffic control plans, the Contractor must contact the Engineer for assistance prior to setting up a traffic control pattern.

PLACEMENT OF SIGNS

Signs must be placed in such a position to allow 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 TRAFFIC CONTROL PLANS

The 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 whenever possible.

The proper application of the traffic control plans and installation of traffic control devices depends on actual field conditions.

Adjustments to the traffic control plans shall be made only at the direction of the Engineer to improve the visibility of the signs and devices and to better control traffic operations. Adjustments to the traffic control plans shall be based on safety of work forces and motorists, abutting property requirements, driveways, side roads, and the vertical and horizontal curvature of the roadway.

The Engineer may require that the traffic control pattern be located significantly in advance of the work area to provide better sight line to the signing and safer traffic operations through the work zone.

Table I indicates the minimum taper length required for a lane closure based on the posted speed limit of the roadway. These taper lengths shall only be used when the recommended taper lengths shown on the traffic control plans cannot be achieved.

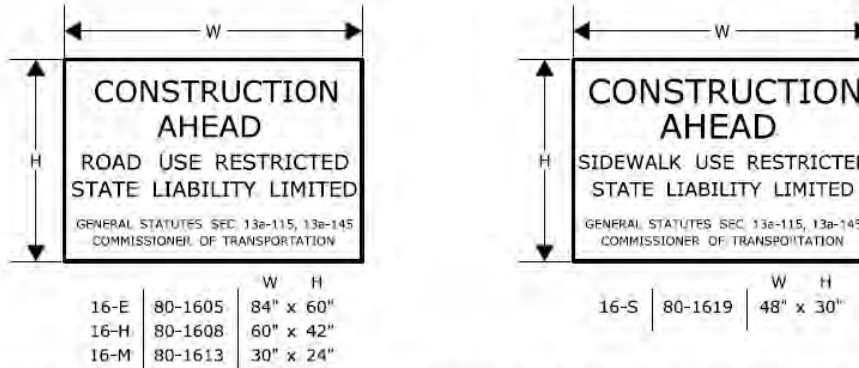
TABLE I – MINIMUM TAPER LENGTHS

POSTED SPEED LIMIT MILES PER HOUR	MINIMUM TAPER LENGTH IN FEET FOR A SINGLE LANE CLOSURE
30 OR LESS	180
35	250
40	320
45	540
50	600
55	660
65	780

USE OF TRAFFIC DRUMS AND TRAFFIC CONES

- 6.a) Traffic drums shall be used for taper channelization on limited-access roadways, ramps, and turning roadways and to delineate raised catch basins and other hazards.
- 6.b) 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.
- 6.c) Traffic Cones less than 42 inches in height shall not be used on limited-access roadways or on non-limited access roadways with a posted speed limit of 45 mph and above.
- 6.d) Typical spacing of traffic drums and/or cones shown on the Traffic Control Plans in the Contract are maximum spacings and may be reduced to meet actual field conditions as required.

SERIES 16 SIGNS



THE 16-S SIGN 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 TO ALLOW MOTORISTS THE OPPORTUNITY TO AVOID A WORK ZONE. SERIES 16 SIGNS SHALL BE INSTALLED ON ANY MAJOR INTERSECTING ROADWAYS THAT APPROACH THE WORK ZONE. ON LIMITED-ACCESS HIGHWAYS, THESE SIGNS SHALL BE LOCATED IN ADVANCE OF THE NEAREST UPSTREAM EXIT RAMP AND ON ANY ENTRANCE RAMPS PRIOR TO OR WITHIN THE WORK ZONE LIMITS.

THE LOCATION OF SERIES 16 SIGNS CAN BE FOUND ELSEWHERE IN THE PLANS OR INSTALLED AS DIRECTED BY THE ENGINEER.

SIGNS 16-E AND 16-H SHALL BE POST-MOUNTED.

SIGN 16-E SHALL BE USED ON ALL 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.

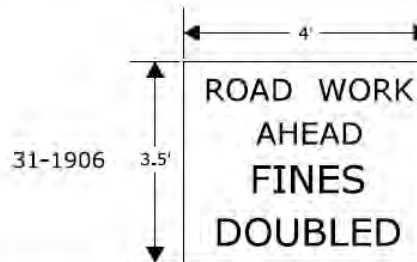
REGULATORY SIGN "ROAD WORK AHEAD, FINES DOUBLED"

THE REGULATORY SIGN "ROAD WORK AHEAD FINES DOUBLED" SHALL BE INSTALLED FOR ALL WORK ZONES THAT OCCUR ON ANY STATE HIGHWAY IN CONNECTICUT WHERE THERE ARE WORKERS ON THE HIGHWAY OR WHEN THERE IS OTHER THAN EXISTING TRAFFIC OPERATIONS.

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.

"END ROAD WORK" SIGN

THE LAST SIGN IN THE PATTERN MUST BE THE "END ROAD WORK" SIGN.



SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
REQUIRED SIGNS

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 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. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN TRAFFIC DRUMS SHALL BE USED IN PLACE OF TRAFFIC CONES.
5. ANY LEGAL SPEED LIMIT 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 36 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 < 40 MPH).
8. IF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
9. A CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF 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' (55m)
35	250' (75m)
40	320' (100m)
45	540' (165m)
50	600' (180m)
55	660' (200m)
65	780' (240m)

METRIC CONVERSION CHART (1" = 25mm)

ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
12"	300mm	42"	1050mm	72"	1800mm
18"	450mm	48"	1200mm	78"	1950mm
24"	600mm	54"	1350mm	84"	2100mm
30"	750mm	60"	1500mm	90"	2250mm
36"	900mm	66"	1650mm	96"	2400mm

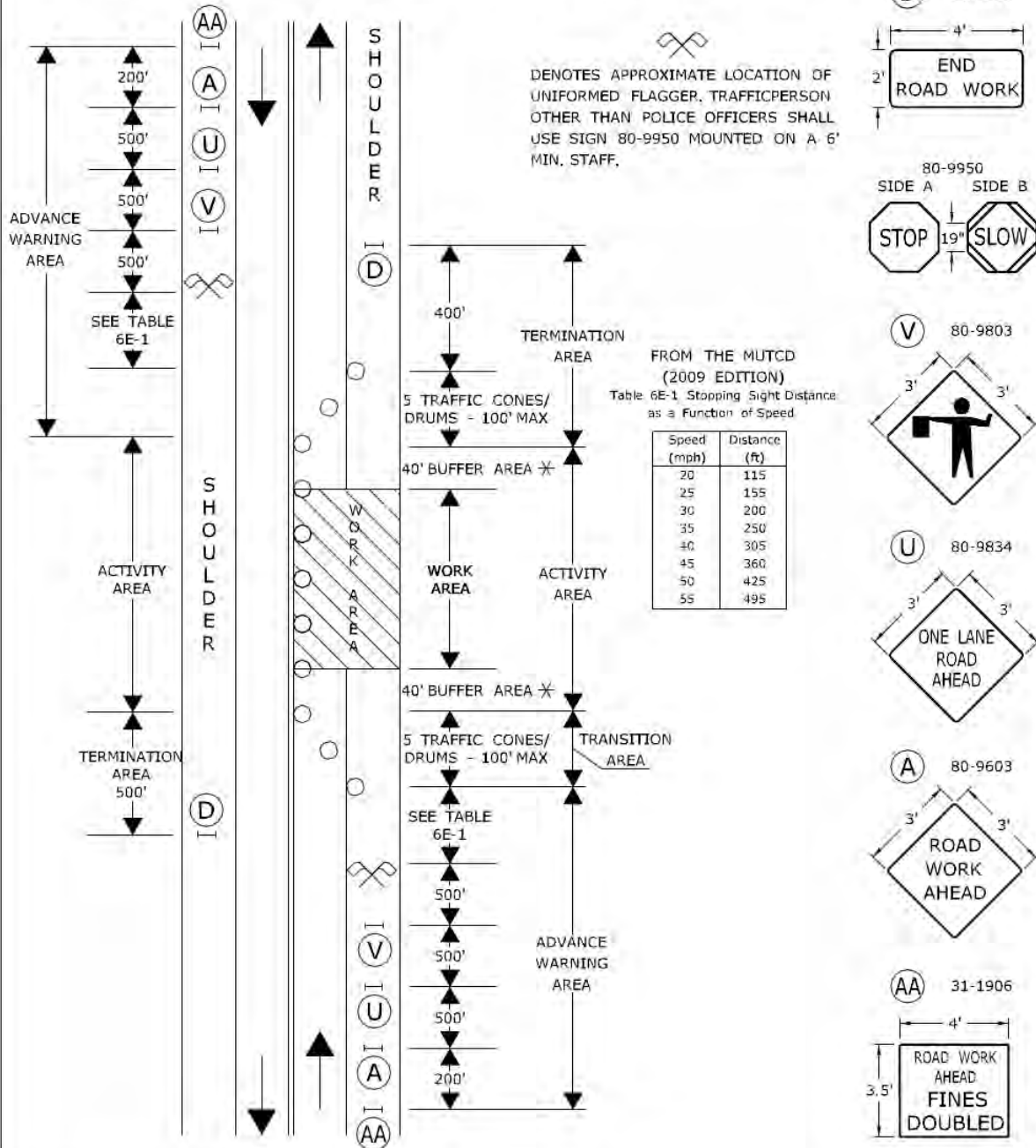


SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN NOTES

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE
108 SQ. FT (MIN.)



- TRAFFIC CONE OR TRAFFIC DRUM
- * OPTIONAL ⊗ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ◀ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW



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 _____
PRINCIPAL ENGINEER

Charles S. Herow
2012.06.05 15:55:23-04:00

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



SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

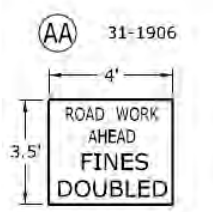
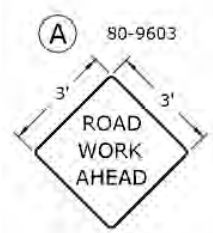
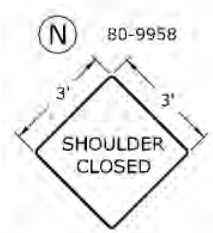
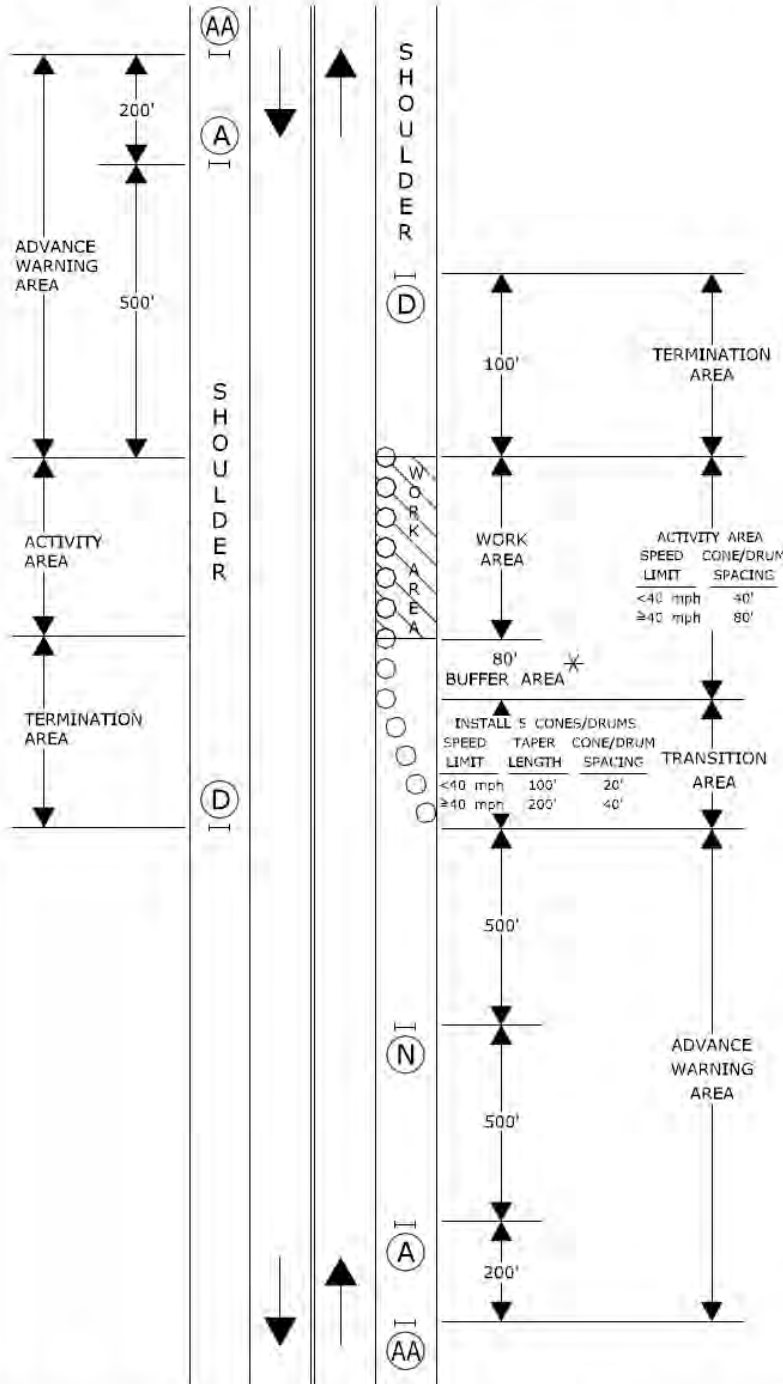
CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED PRINCIPAL ENGINEER

Charles S. Harlow
2012.08.05 15:55:45-04'00'

WORK IN SHOULDER - TWO LANE HIGHWAY

SIGN FACE
71 SQ. FT (MIN.)



ACTIVITY AREA	SPEED LIMIT	CONE/DRUM SPACING
<40 mph	40'	
≥40 mph	80'	

INSTALL 5 CONES/DRUMS

SPEED LIMIT	TAPER LENGTH	CONE/DRUM SPACING	TRANSITION AREA
<40 mph	100'	20'	
≥40 mph	200'	40'	

- TRAFFIC CONE **OR** TRAFFIC DRUM
- * OPTIONAL ⊗ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ← HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW



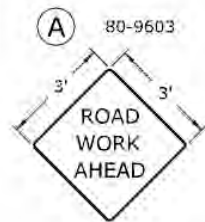
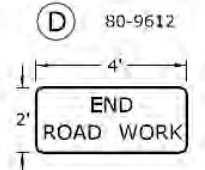
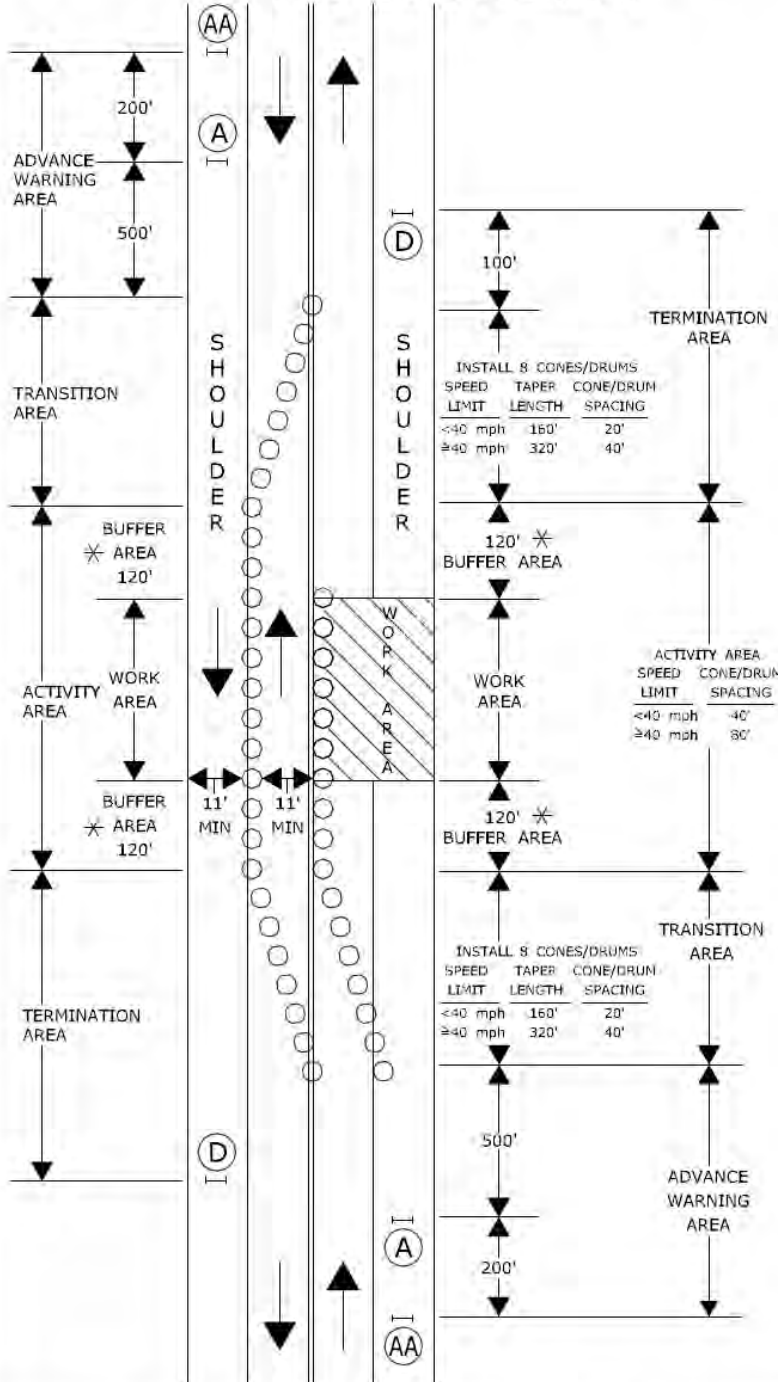
CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 14
SEE NOTES 1, 2, 4, 7, 8

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED _____
Charles S. Harlow
2012.08.05 15:56:09-04'00"
PRINCIPAL ENGINEER

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY

SIGN FACE
62 SQ. FT (MIN.)



INSTALL 8 CONES/DRUMS

SPEED LIMIT	TAPER LENGTH	CONE/DRUM SPACING
<40 mph	160'	20'
≥40 mph	320'	40'

ACTIVITY AREA

SPEED LIMIT	CONE/DRUM SPACING
<40 mph	40'
≥40 mph	80'

INSTALL 8 CONES/DRUMS

SPEED LIMIT	TAPER LENGTH	CONE/DRUM SPACING
<40 mph	160'	20'
≥40 mph	320'	40'

- TRAFFIC CONE **OR** TRAFFIC DRUM
- * OPTIONAL ⊗ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ← HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW



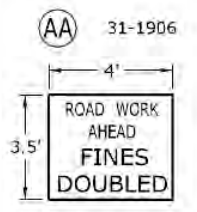
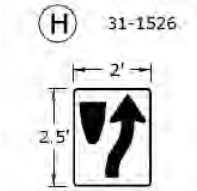
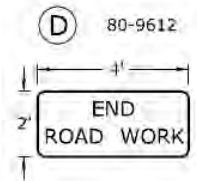
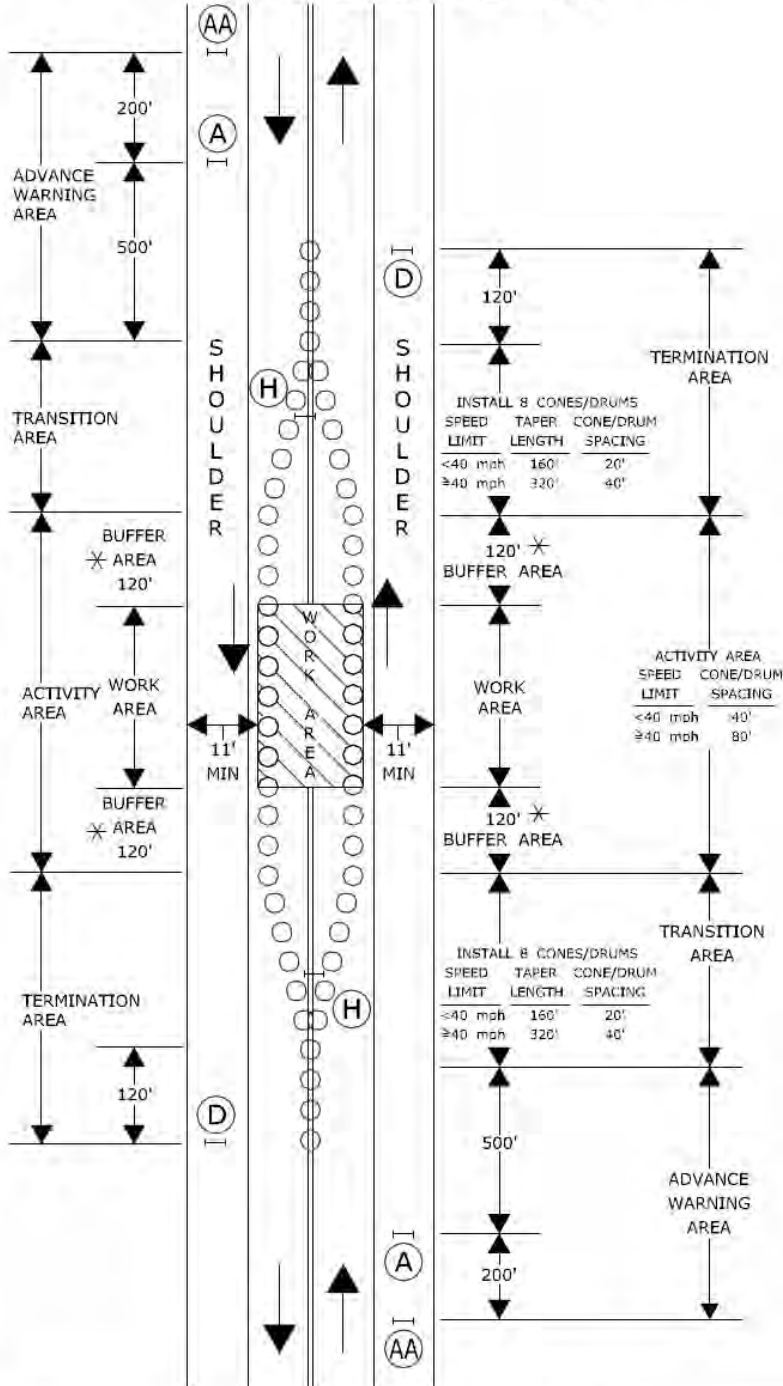
CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 15
SEE NOTES 1, 2, 4, 6, 7, 8

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED: _____
Charles S. Harlow
2012.06.05 15:56:29-04:00
PRINCIPAL ENGINEER

WORK IN MIDDLE OF ROADWAY TWO LANE HIGHWAY

SIGN FACE
72 SQ. FT (MIN.)



- TRAFFIC CONE **OR** TRAFFIC DRUM
- * OPTIONAL ⊗ TRAFFIC DRUM — PORTABLE SIGN SUPPORT
- ◀ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW



CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 16
SEE NOTES 1, 2, 4, 6, 7, 8

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED _____
Charles S. Hanow
2012.06.05 15:56:51-04:00
PRINCIPAL ENGINEER

Article 9.71.05 – Basis of Payment is replaced by the following:

This price shall include all costs for labor, equipment and services involved in the furnishing, erection, maintenance, moving, adjusting, cleaning, relocation and storing of signs, barricades, drums, traffic cones and delineators furnished by the Contractor as well as all costs of labor and equipment involved in the maintenance of traffic lanes and detours.

The temporary relocation of signs and supports, and the furnishing, installation and removal of any temporary supports shall be included in the lump sum price for the item "Maintenance and Protection of Traffic".

The cost of furnishing, installing, and removing the material for the 4H:1V traversable slope shall be included in the lump sum price for the item "Maintenance and Protection of Traffic."

The cost of furnishing, installing, and removing material(s) for any temporary pavement or gravel required to maintain traffic shall be included in the lump sum price for the item "Maintenance and Protection of Traffic."

Pay Item

Maintenance and Protection of Traffic

Pay Unit

L.S.

ITEM NO. 1111201A – TEMPORARY DETECTION (SITE NO. 1)

Description:

Provide a Temporary Detection (TD) system at signalized intersections throughout the duration of construction for all construction stages, 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 (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>Pulse</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>Pulse</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>0</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 Detection will be paid only once per site as a percentage of the contract Lump Sum price. Fifty percent (50%) will be paid when Temporary Detection is initially set up, approved, and becomes fully operational as shown for Temporary Stage 3 plan, and 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. 1)". The price includes furnishing, installing, relocating, realigning, maintaining, and removing the necessary detection systems through all stages of construction 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. 1)." 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 1.)	L. S.

ITEM #1111401A - LOOP VEHICLE DETECTOR

ITEM #1111451A - LOOP DETECTOR SAWCUT

Replace Section 11.11, LOOP VEHICLE DETECTOR AND SAWCUT, with the following:

11.11.01 – Description:

1. Furnish and install a loop vehicle detector amplifier.
2. Sawcut pavement. Furnish and install loop detector wire in sawcut.

11.11.02 – Materials:

Article M.16.12

M.16.12 - LOOP VEHICLE DETECTOR AND SAWCUT

1. Loop Vehicle Detector:

- Comply with National Electrical Manufacturers Association (NEMA) standards, Section 6.5, Inductive Loop Detectors.
- Comply with the current CT DOT Functional Specifications for Traffic Control Equipment, Section 3 B, Loop Vehicle Detector with Delay/Extend Option.

2. Sawcut:

(a) Wire in sawcut:

- International Municipal Signal Association (IMSA) Specification 51-7, single conductor cross-linked polyethylene insulation inside polyethylene tube.
- # 14 AWG

(b) Sealant:

(1) Polyester Resin Compound

- Two part polyester which to cure, requires a liquid hardener.
- Use of a respirator not necessary when applied in an open air environment.
- Cure time dependent on amount of hardener mixed.
- Flow characteristics to guarantee encapsulation of loop wires.
- Viscosity: 4000 CPS to 7000 CPS at 77 degrees Fahrenheit (25° C).
- Form a tack-free skin within 25 minutes and full-cure within 60 minutes at 77 degrees Fahrenheit (25° C).
- When cured, resist effects of weather, vehicular abrasion, motor oil, gasoline, antifreeze, brake fluid, de-icing chemicals, salt, acid, hydrocarbons, and normal roadway encounters.
- When cured, maintain physical characteristics throughout the ambient temperature ranges experienced within the State of Connecticut.
- When cured, bonds (adheres) to all types of road surfaces.
- Weight per Gallon (3.8 l): 11 lbs ±1 lb (5kg ± .45kg)

- Show no visible signs of shrinkage after curing.
- 12 month shelf life of unopened containers when stored under manufacturers specified conditions.
- Cured testing requirements:
 - Gel time at 77 degrees F (25° C): 15 - 20 minutes, ASTM C881, D-2471
 - Shore D Hardness at 24 hours: 55-78, ASTM D-2240
 - Tensile Strength: > 1000 psi (6895 kPa), ASTM D-638
 - Elongation: 18 - 20 %, ASTM D-638
 - Adhesion to steel: 700 - 900 psi (4826 - 6205 kPa), ASTM D-3163
 - Absorption of water, sodium chloride, oil, and gasoline: < 0.2%, ASTM D-570
- Include in the Certificate of Compliance:
 - Manufacturer's confirmation of the uncured and cured physical properties stated above.
 - Material Safety Data Sheet (MSDS) stating sealant may be applied without a respirator in an open air environment.
- Designed to allow clean-up without the use of solvent that is harmful to the workers and the environment.

(2) Elastomeric Urethane Compound:

- One part urethane which to cure, does not require a reactor initiator, or a source of thermal energy prior to or during its installation.
- Use of a respirator not necessary when applied in an open air environment.
- Cure only in the presence of moisture.
- Flow characteristics to guarantee encapsulation of loop wires.
- Viscosity such that it does not run out of the sawcut in sloped pavement during installation; 5000 CPS to 85,000 CPS.
- Form a tack-free skin within 24 hours and 0.125 inch (0.33mm) cure within 30 hours at 75 degrees Fahrenheit (24° C).
- When cured, resist effects of weather, vehicular abrasion, motor oil, gasoline, antifreeze, brake fluid, de-icing chemicals, salt, acid, hydrocarbons, and normal roadway encounters.
- When cured, maintain physical characteristics throughout the ambient temperature ranges experienced within the State of Connecticut.
- Show no visible signs of shrinkage after curing.
- Shelf life when stored under manufacturers specified conditions:
 - Caulk type cartridges: minimum 9 months
 - Five gallon containers: minimum 12 months
- Designed for application when the pavement surface temperature is between 40 and 100 degrees Fahrenheit (4° and 38° C).
- Uncured testing requirements:
 - Weight/Gallon: ASTM D-1875
 - Determination of Non-volatile Content: ASTM D-2834
 - Viscosity: ASTM D-1048B
 - Tack-free Time: ASTM D-1640
- Cured testing requirements:
 - Hardness: ASTM D-2240
 - Tensile Strength & Elongation: ASTM D-412A
- Include in the Certificate of Compliance:
 - Manufacturer's confirmation of the uncured and cured physical properties stated above.
 - Material Safety Data Sheet (MSDS) stating sealant may be applied without a respirator in an open air environment.

- Designed to allow clean-up without the use of solvent that is harmful to the workers and the environment.

3. Miscellaneous:

- (a) Liquidtight Flexible Nonmetallic Conduit
 - UL listed for direct burial
 - UL 1660
 - Smooth polyvinyl chloride inner surface
- (b) Water Resistant Pressure Type Wire Connector
 - UL listed for direct burial and wet locations
 - UL 486D

11.11.03 - Construction methods:

1. Loop Vehicle Detector

- Shelf-mount the detector amplifier in the controller cabinet.
- Terminate the harness conductors with crimped spade connectors. Connect conductors to appropriate terminals, eg, black wire to 110vac, white wire to 110vac neutral.
- Tie loop harness and conductors to controller cabinet wiring harness. Leave enough slack in loop harness so that amplifier may be moved around on cabinet shelf; ± 2 feet (0.6 meter) slack.
- Attach a loop identification tag to the harness. Record pertinent detector information on the tag with indelible ink. See example below.
 - Loop No.: D4
 - Phase Call: Phase 4
 - Field Location: Rt. 411(West St.)
 - Eastbound, Left Lane
 - Detector No.: 4
 - Cabinet Terminals: 234, 235

2. Loop Detector Sawcut

- Loop size, number of turns, and location is shown on the intersection plan.
- Do not cut through a patched trench, damaged or poor quality pavement without the approval of the Engineer.
- Wet-cut pavement with a power saw using a diamond blade $\frac{3}{8}$ inch (9.5mm) wide. Dry-cut is not allowed.
- Ensure slot depth is between 1 $\frac{3}{4}$ inch to 2.0 inch (45mm to 50mm).
- Overlap corners to ensure full depth of cut.
- To prevent wire kinking and insulation damage, chamfer inside of corners that are ≤ 120 degrees.
- Clean all cutting residue and moisture from slot with oil-free compressed air. Ensure slot is dry before inserting wire and sealing sawcut.
- Cut home-run, from loop to curb or edge-of-road, as shown on the typical installation sheet.
- To prevent cross-talk and minimize electrical interference, twist home-run wires, from edge of road to handhole, with at least 5 turns per foot (16 turns per meter). Tape together twisted home-run wires at 2 foot (0.6 meter) \pm intervals.
- In new or resurfaced pavement, install loops in the wearing course. If the wearing course is not scheduled for immediate placement (within 24 hours) after the base course, provide temporary detection when directed by the Engineer. Temporary detection may be sawcut loops, preformed loops, microwave sensor, video, or other method approved by the Engineer.
- Splice(s) not allowed anywhere in loop wire either in loop or in home-run.

- Ensure wires are held in place at bottom of slot by inserting at 2 foot (0.6 m) intervals, 1 inch sections of foam backer rod or wedges formed from 1 inch (25mm) sections of the polyethylene tubing. Loop detectors with wires that have floated to the top of the sealant will not be accepted.
- To create a uniform magnetic field in the detection zone, wind adjacent loops in opposite directions.
- Use **polyester compound** as the sealant unless another type is allowed by the Engineer.
- Mix hardening agent into polyester resin with a power mixer or in an application machine designed for this type of sealant in accordance with the manufacturer's instructions.
- Apply the loop sealant in accordance with the manufacturer's instructions and the typical installation sheet. Do not apply sealant when pavement temperature is outside the manufacturers recommended application range.
- Solder splice the loop wires to the lead-in cable and install water resistant connector as shown on the typical installation sheet.
- Test the loop circuit resistance, inductance, and amplifier power-interruption as shown on the typical installation sheet. Document all test results.

3. Damaged, Patched, or Excessively Worn Pavement

- Where the existing pavement is damaged, patched or excessively worn and is found to be not suitable for reliable loop detection, notify the Engineer.
- When directed by the Engineer, remove and replace an area of pavement to allow the proper installation of the loop.
- Remove a minimum of 3 inches (75mm) depth.
- Comply with the applicable construction methods of Section 2.02 Roadway Excavation, Formation Of Embankment and Disposal of Surplus Material, and Section 4.06 Bituminous Concrete, such as:
 - Cut Bituminous Concrete
 - Material for Tack Coat
 - Bituminous Concrete Class 1

4. Re-surface/Overlay Project

- Prior to disconnecting the existing loop confirm that the amplifier is operating properly and is programmed according to plan. Document loop operation. Report any discrepancies and malfunctions to Engineer.
- Remove all abandoned sawcut home-run wire from handhole.
- Sawcut new loop according to plan.
- Solder splice new loop wires to the existing lead-in cable and install new water resistant twist connectors as shown on the typical installation sheet. Do not re-use the removed connectors.
- Test the loop circuit resistance and inductance. Document results.
- Ensure the existing loop amplifier has re-tuned to the new loop and is operating according to plan.

11.11.04 – Method of Measurement:

1. Loop Vehicle Detector is measured by the number of installed, operating, tested, and accepted vehicle detector amplifiers of the type specified.
2. Loop Detector Sawcut is measured by the number of linear feet (meters) of installed, tested, operating, and accepted sawcut only where there is loop wire. Over-cuts at corners that do not contain wire are not measured.

11.11.05 – Basis of Payment:

1. Loop Vehicle Detector is paid at the contract unit price each of the type specified.
2. Loop Detector Sawcut is paid at the contract unit price per linear foot (meter). The price includes sawcut, loop wire, sealant, liquidtight flexible nonmetallic conduit, duct seal, water resistant splice connectors, testing, incidental material, equipment, and labor.

<u>Pay Item</u>	<u>Pay Unit</u>
Loop Vehicle Detector	ea. (ea.)
Loop Detector Sawcut	l.f. (m)

ITEM # 1117110A – RECTANGULAR RAPID FLASHING BEACON (RRFB) – TYPE A

ITEM # 1117111A – RECTANGULAR RAPID FLASHING BEACON (RRFB) – TYPE B

Description: Furnish and install a solar powered rectangular rapid flashing beacon (RRFB) at the location indicated on the plan or where directed by the Engineer.

Each RRFB will be a complete assembly consisting of but not limited to the following:

- RRFB unit with two rapidly flashed rectangular-shaped yellow LED indications
- Controller cabinet (circuit breaker, timer or solid-state circuit boards etc.) or any electrical component hardware
- Pedestal
- Pedestal Foundation
- Pushbutton
- Push button Signs
- Mounting hardware
- If Solar, all solar equipment

Type A: Single sided RRFB will contain two rapidly flashed rectangular-shaped yellow LED indications (two indications on one side facing traffic)

Type B: Double sided RRFB will contain four rapidly flashed rectangular-shaped yellow LED indications (two indications on each side facing traffic)

Materials: The materials for the work shall be specified in the following:

Pedestals:

Article M.16.03

Pedestrian Push Button:

A. General

- Size and force compliant with ADA, Section 14.2.5, Crossing Controls.
- Tamper-proof, and Vandal-proof, Weatherproof, Freeze-proof, Impact-resistant design and construction.
- Completely insulated to preclude electrical shock under any weather conditions.
- Wire entrance through the rear.
- Stainless steel mounting hardware.

B. Actuation

1. Mechanical:

- Single momentary contact switch with tactile feedback.
- Rated at 10 amps, 125 volts.
- Normally open, closed when actuated.

2. Piezo:

- Either non-movable or minimal movement (< 1/16" (1.6)) pressure activation.
- Audible confirmation beep to correspond with circuit closure.

- Minimum 100,000,000 actuations.

C. Housing

- Die cast aluminum meeting requirements of ASTM B85.
- Designed to attach a four-hole advisory sign: .9" x 12" (230 x 300) or 9" x 15" (230 x 380) if indications are countdown
- Flat back to facilitate surface mount.
- Available hardware to either pedestal top-mount or pole side-mount on diameter range of 3½" (89) to 15" (380).
- Available extension bracket of a size indicated on the plan – 18" maximum.

D. Finish

- Method: Either
 1. Painted with 3 coats of infrared oven-baked paint before assembly.
 - Primer: Baked iron oxide which meets or exceeds FS TT-P-636.
 - Second coat: Exterior-baking enamel, light gray, which meets or exceeds FS TT-E-527.
 - Third coat: Exterior-baking enamel, which meets or exceeds FS TT-E-489.
 2. Electrostatic powder coated after chemically cleaned.
- Color:

The housing and all brackets and hardware shall be black by the manufacturer. The color shall be No. 17038, Federal Standard No. 595.

Cabinet:

Article M.16.10

Pedestal Foundations:

Foundations shall be in accordance with Section 10.02 and the detail for "Traffic Control Foundation Pedestal – Type I – Precast" or alternate design detail as submitted by Contractor.

Construction Method:

The Contractor shall submit to the Engineer, a proposed RRFB Assembly with manufacturer's details for each component as listed above as required for a fully operational assembly. Also included in the submission shall be either:

- a) The manufacturer's concurrence of the "Traffic Control Foundation Pedestal – Type I – Precast" as a suitable design for the submitted pedestal or;
- b) Design and detail for required foundation.

Each RRFB indication will be mounted on a standard aluminum pedestal and in accordance with the manufacturer's required dimensions and details shown on the plan.

Each Solar RRFB will require a location free of any vegetation or obstruction which will inhibit solar charging.

Each RRFB shall initiate operation only upon pedestrian actuation and shall cease operation after a programmed time (20 seconds) or determined by the Engineer (based on MUTCD procedures).

All RRFBs associated with a given crosswalk (including those with an advance crossing sign, if used) shall, when activated, simultaneously commence operation of their rapid-flashing indications and shall cease operation simultaneously.

Mechanical and Electrical Requirements:

- a) Dimensions:
 - Each indication shall be at least 5” wide by 2” high.
 - The indications shall be aligned horizontally, with the longer dimension horizontal and with a minimum space of 7” between the two indications
 - The outside edges of the indications, including any housing, shall not project beyond the outside edges of the sign that it supplements.

- b) Power:
 - Hardwired:
 - AC input, 100-240 VAC, 50/60Hz
 - DC output, 12 VDC, +/- 1%
 - Solar:
 - DC input, 12 VDC, 55W
 - DC output, 12 VDC, +/- 1%

- c) Temperature & Humidity:
 - All components will be capable of continuous operation in accordance with NEMA Standards

- d) Indications:
 - Flash Pattern:
 - When actuated, the two yellow indications in each RRFB unit shall flash in a rapidly flashing sequence and shall provide 75 flashing sequences per minute.
 - Shall comply with MUTCD
https://mutcd.fhwa.dot.gov/resources/interim_approval/ia21/ia21.pdf
 - Optics:
 - ITE LED
 - Light Intensity:
 - During daytime conditions: shall meet the minimum specifications for Class 1 yellow peak luminous intensity in the Society of Automotive Engineers (SAE) Standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005.
 - During nighttime conditions: an automatic signal dimming device shall be used to reduce the brilliance of the indications.
 - Housing Color:
 - Federal Yellow

- e) Control Cabinet:
 - Shall be NEMA 3R type

Method of Measurement:

This work will be measured as the number of RRFB furnished, installed and accepted in place.

Basis of Payment:

This work will be paid for at the contract unit price of each “Rectangular Rapid Flashing Beacon (RRFB)” of the type specified which will include the cost of RRFB unit, hardware, controller cabinet complete with all necessary excavation, cables, conduits, equipment, pedestal, pedestal foundation, push button, push button sign, ground rod, ground cable, paint and all materials, equipment, tools and labor included thereto.

The following items will be paid for separately:

- Sign Face – Sheet Aluminum for the warning signs

Pay Items	Pay Unit
Rectangular Rapid Flashing Beacon (RRFB) Type A	Ea.
Rectangular Rapid Flashing Beacon (RRFB) Type B	Ea.

ITEM NO. 1118051A – TEMPORARY SIGNALIZATION (SITE NO. 1)

Description:

Provide Temporary Signalization (TS) at the intersection shown on the plans for all stages of construction or as directed by the Engineer.

1. Existing Signalized Intersection: 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.

2. Unsignalized Intersection: Provide TS during construction activities and convert the temporary condition to a permanent traffic signal upon project completion. Furnish, install, maintain, and relocate equipment to provide a complete temporary traffic signal, including but not limited to the necessary support structures, electrical energy, vehicle and pedestrian indications, vehicle and pedestrian detection, pavement markings, and signing.

Materials:

- Pertinent articles of the Standard Specifications
- Supplemental Specifications and Special Provisions contained in this contract

Construction Methods:

Preliminary Inspection

In the presence of the Engineer and a representative from the DOT Electrical Maintenance Office (Town representative for a Town owned signal), inspect and document the existing traffic signal's physical and operational condition prior to Temporary Signalization. Include but do not limit the inspection to 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. Develop a checklist of items for replacement or repair after the inspection. If authorized by the Engineer, this work will be considered "Extra Work" under Article 1.09.04.

* At a State owned signal the EVPS equipment is usually owned by the municipality. It is recommended to apprise the municipality of the inspection schedule and results.

TS Plan

At least 30 days prior to implementation of each stage, submit a 1:40 (1:500 metric) scale TS plan for each location to the Engineer for review and comment. Include but do not limit the plan 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

Review of the TS plan does not relieve the Contractor of ensuring the TS meets the requirements of the MUTCD. A copy of the existing traffic signal plan for State-owned traffic signals is available from the Division of Traffic Engineering upon request. Request existing traffic signal plans for Town-owned traffic signals from the Town. Do not implement the TS plan until all review comments have been addressed.

Earthwork

Perform the necessary clearing and grubbing and the grading of slopes required for the installation, maintenance, and removal of the TS equipment. After TS terminates restore the affected area to the prior condition and to the satisfaction of the Engineer.

Maintenance and Protection of Traffic

Furnish, install, maintain, relocate, and remove signal-related signing (lane-use, signal ahead, NTOR, etc.) and pavement markings as needed. Install, relocate, and/or remove equipment in a manner to cause no hazard to pedestrians, traffic or property. Maintain traffic as specified in the Special Provisions "Prosecution and Progress" and "Maintenance and Protection of Traffic."

Electrical Service and Telephone Service at Existing Signalized Intersections

If the electrical service or the telephone service source must be changed or relocated make all arrangements with the utility company and assume all charges. The party previously responsible for the monthly payment of service shall continue to be responsible during TS.

Electrical Service at Unsignalized Intersections

Assume all charges and make all arrangements with the power company, including service requests, scheduling, and monthly bills in accordance with Section 10.00.12 and Section 10.00.13 of the Standard Specifications,. A metered service is recommended where TS equipment will be removed when no longer needed.

Temporary Signalization

Furnish, install, maintain, relocate, and remove existing, temporary, and proposed traffic signal equipment and all necessary hardware; modify or furnish a new CA; reprogram the CU phasing and timing; 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, which may generate additional comments requiring revisions to the temporary signal.

Detection

Provide vehicle detection on the existing, temporary, and/or new roadway alignment for all intersection approaches that have existing detection, that have detection in the final condition as shown on the signal plan, or as directed by the Engineer. Keep existing pedestrian pushbuttons accessible and operational at all times during TS. Temporary Detection is described and is paid for under Item # 1111201A - Temporary Detection (Site No. 1)

Emergency Vehicle Pre-emption System (EVPS)

Furnish, install, maintain, relocate, and remove the equipment necessary to keep the existing EVPS operational as shown on the plan. Do not disconnect or alter the EVPS without the knowledge and concurrence of the Engineer and the EVPS owner. Schedule all EVPS relocations so that the system is out of service only when the Contractor is actively working. Ensure EVPS is returned to service and is completely operational at the end of the work day. Keep the EVPS owner apprised of all changes to the EVPS.

Coordination

Furnish, install, maintain, relocate, and remove the equipment necessary to keep the intersection coordinated to adjacent signals as shown on the plan. Do not disconnect the interconnect without the approval of the Engineer.

- Closed Loop System: If it is necessary to disconnect the communication cable, notify the Engineer and the Bridgeport Operation Center (BOC) or the Newington Operation Center (NOC) prior to disconnect and also after it is reconnected.
- Time Base System: Program and synchronize all Time Clock/Time Base Coordination (TC/TBC) units as necessary.

Maintenance

Once TS is in effect, assume maintenance responsibilities of the entire installation in accordance with Section 1.07.12 of the Standard Specifications. Notify the Engineer for the project records the date that Temporary Signalization begins. 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

Provide the Engineer a list of telephone numbers of personnel who will be on-call during TS. Respond to traffic signal malfunctions by having a representative at the site within three hours from the initial contact. Within twenty-four (24) hours have the traffic signal operating according to plan.

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 any existing signal equipment is disturbed, relocated, or altered based on the inspection checklist in any way for the TS.

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. For intersections with a Contractor furnished controller, Temporary Signalization terminates at the beginning of the 30 day test period for the permanent signal.

Ownership

Existing equipment, designated as salvage, remains the property of the owner. Salvable equipment will be removed and delivered to the owner upon completion of use. Temporary equipment supplied by the Contractor remains the Contractor's property unless noted otherwise.

Method of Measurement:

Temporary Signalization shall be paid only once per site on a percentage of the contract Lump Sum price. Fifty percent (50%) shall be paid when TS is operational as shown on the plan for Stage 3 or to the satisfaction of the Engineer. Fifty percent (50%) shall be paid when TS terminates.

Basis of Payment:

This work shall be paid at the contract Lump Sum price for "Temporary Signalization (Site No. 1)" for each site. This price includes the preliminary inspection, TS plan for each stage, 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, 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 1111201A - Temporary Detection (Site No. 1).

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 are not 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 Signalization (Site No. 1)	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.

<u>Pay Item</u>	<u>Pay Unit</u>
Removal and Relocation of Existing Signs	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

ITEM #1303196A – RELOCATE FIRE HYDRANT

Description:

Work under this item shall include relocation of the existing fire hydrant to a new location as shown on the plans and as directed by the Engineer in conformity with these specifications and the Town of Colchester Water Department requirements.

Construction Methods:

The Contractor shall coordinate with the Colchester Water Department prior to starting any work for this item.

The Contractor shall carefully remove, store and relocate the existing hydrant to the new location as shown on plan or as directed by Engineer. Any damaged and/or additional material shall be replaced and/or provided, in kind by the Contractor in accordance with the Town of Colchester Water Department specifications.

All components of the hydrant shall be installed in accordance with the Town of Colchester Water Department. Contractor shall coordinate all work with the Town of Colchester Water Department during the removal and installation of the hydrant. The completed installation shall be checked, tested and approved prior to backfill.

Method of Measurement:

This work will be measured for payment by the contract unit price each for "Relocate Fire Hydrant", completed and accepted.

Basis of Payment:

This item will be paid for at the contract unit price each for "Relocate Fire Hydrant", which price shall include removal and storage of the existing hydrant, all materials (including additional new materials), tools, equipment, testing and labor incidental thereto for the installation of the hydrant assembly. This item shall also include all coordination and scheduling with the Colchester Water Department.

Pay Item	Pay Unit
Relocate Fire Hydrant	EA.

TAB G

State Contract Provisions

**Construction Contracts - Required Contract Provisions
(State Funded Only Contracts)**

Index

1. Title VI of the Civil Rights Act of 1964 / Nondiscrimination Requirements
2. Contractor Work Force Utilization / Specific Equal Employment Opportunity
3. Contract Wage Rates
4. Americans with Disabilities Act of 1990, as Amended
5. Connecticut Statutory Labor Requirements
 - a. Construction, Alteration or Repair of Public Works Projects; Wage Rates
 - b. Debarment List - Limitation on Awarding Contracts
 - c. Construction Safety and Health Course
 - d. Awarding of Contracts to Occupational Safety and Health Law Violators Prohibited
 - e. Residents Preference in Work on Other Public Facilities (Not Applicable to Federal Aid Contracts)
6. Tax Liability - Contractor's Exempt Purchase Certificate (CERT – 141)
7. Executive Orders (State of CT)
8. Non Discrimination Requirement (pursuant to section 4a-60 and 4a-60a of the Connecticut General Statutes, as revised)
9. Whistleblower Provision
10. Connecticut Freedom of Information Act
 - a. Disclosure of Records
 - b. Confidential Information
11. Service of Process
12. Substitution of Securities for Retainages on State Contracts and Subcontracts
13. Health Insurance Portability and Accountability Act of 1996 (HIPAA)
14. Forum and Choice of Law
15. Summary of State Ethics Laws
16. Audit and Inspection of Plants, Places of Business and Records
17. Campaign Contribution Restriction

18. Tangible Personal Property
19. Bid Rigging and/or Fraud – Notice to Contractor
20. Consulting Agreement Affidavit

Index of Exhibits

- EXHIBIT A – Title VI Contractor Assurances (page 13)
- EXHIBIT B – Contractor Work Force Utilization / Equal Employment Opportunity (page 14)
- EXHIBIT C – Health Insurance Portability and Accountability Act of 1996 (HIPAA) (page 17)
- EXHIBIT D - Campaign Contribution Restriction (page 25)
- EXHIBIT E - State Wage Rates (Attached at the end)

1. 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 A, all of which are hereby made a part of this Contract.

2. Contractor Work Force Utilization / Equal Employment Opportunity

- (a) The Contractor shall comply with the Contractor Work Force Utilization / Equal Employment Opportunity requirements attached at Exhibit B 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.

3. Contract Wage Rates

The Contractor shall comply with:

The State wage rate requirements indicated in Exhibit E hereof are hereby made part of this Contract.

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 816), 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.

4. 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.

5. 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

6. 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).

7. 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.

8. 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>

9. 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.

10. 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.

11. 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.

12. 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.

13. 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 C, and hereby made part of this Contract.

14. 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.

15. 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.

16. 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.

17. 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 D.

18. 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.

19. 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.

20. 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.

EXHIBIT A**TITLE VI CONTRACTOR ASSURANCES**

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 shall comply with the regulations relative to nondiscrimination in federally assisted programs of the United States Department of Transportation (hereinafter, "USDOT"), Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the "Regulations"), 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, shall not discriminate on the grounds of race, color, national origin, sex, age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Subsection 5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:**

In all solicitations either by competitive 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 shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, or disability.

4. **Information and Reports:** The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Connecticut Department of Transportation (ConnDOT) or the Funding Agency (FHWA, FTA and FAA) to be pertinent to ascertain compliance with such Regulations, orders, 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 shall so certify to ConnDOT or the Funding Agency, as appropriate, and shall set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the ConnDOT shall impose such sanctions as it or the Funding Agency may determine to be appropriate, including, but not limited to:

- A. Withholding contract payments until the Contractor is in-compliance; and/or
- B. Cancellation, termination, or suspension of the Contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the ConnDOT or the Funding Agency may -direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the ConnDOT to enter into such litigation to protect the interests of the Funding Agency, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States

EXHIBIT B

CONTRACTOR WORKFORCE UTILIZATION / EQUAL EMPLOYMENT OPPORTUNITY

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 Appendix A below.

STATE FUNDED PROJECTS (only)
APPENDIX A
(Labor Market Goals)

LABOR MARKET AREA GOAL
Female

Minority

Bridgeport				22.7%
1.4%				
Ansonia	Beacon Falls	Bridgeport	Derby	
Easton	Fairfield	Milford	Monroe	
Oxford	Seymour	Shelton	Stratford	
Trumbull				
Danbury				10.7%
3.8%				
Bethel	Bridgewater	Brookfield	Danbury	
Kent	New Fairfield	New Milford	Newtown	
Redding	Ridgefield	Roxbury	Sherman	
Washington				
Danielson				4.3%
1.8%				
Brooklyn	Eastford	Hampton	Killingly	
Pomfret	Putnam	Scotland	Sterling	
Thompson	Voluntown	Union	Woodstock	
Hartford				13.7%
2.1%				
Andover	Ashford	Avon	Barkhamsted	

Belin	Bloomfield	Bolton	Bristol
Burlington	Canton	Chaplin	Colchester
Columbia	Coventry	Cromwell	Durham
East Granby	East Haddam	East Hampton	East Hartford
East Windsor	Ellington	Enfield	Farmington
Glastonbury	Granby	Haddam	Hartford
Harwinton	Hebron	Lebanon	Manchester
Mansfield	Marlborough	Middlefield	Middletown
Newington	Plainville	Plymouth	Portland
Rocky Hill	Simsbury	Somers	South Windsor
Southington	Stafford	Suffield	Tolland
Vernon	West Hartford	Wethersfield	Willington
Winchester	Windham	Windsor	Windsor Locks

Lower River			4.3%
1.8%			
Chester	Deep River	Essex	Old Lyme
Westbrook			

LABOR MARKET AREA GOAL

Minority

Female

New Haven			17.9%
3.1%			
Bethany	Branford	Cheshire	Clinton
East Haven	Guilford	Hamden	Killingworth
Madison	Meriden	New Haven	North Branford
North Haven	Orange	Wallingford	West Haven
Woodbridge			

New London			7.4%
3.1%			
Bozrah	Canterbury	East Lyme	Franklin
Griswold	Groton	Ledyard	Lisbon
Montville	New London	North Stonington	Norwich
Old Lyme	Old Saybrook	Plainfield	Preston
Salem	Sprague	Stonington	Waterford
Hopkinton	RI – Westerly Rhode Island		

Stamford			33.2%
2.1%			
Darien	Greenwich	New Canaan	Norwalk
Stamford	Weston	Westport	Wilton

Torrington			4.3%
1.8%			
Canaan	Colebrook	Cornwall	Goshen
Hartland	Kent	Litchfield	Morris
Norfolk	North Canaan	Salisbury	Sharon

Torrington

Warren

Waterbury				12.4%
1.6%				
Bethlehem	Middlebury	Naugatuck	Prospect	
Southbury	Thomaston	Waterbury	Watertown	
Wolcott	Woodbury			

Rev. 4/24/2019

EXHIBIT C**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(g)(2), as amended by P.A. 10-1, 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/seec. 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 fund-raising 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 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 E

(state wages will be inserted here)

TAB H

Prevailing Wage Rate Information

Minimum Rates and Classifications for

ID# 20-9531

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

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

Project #L028-001

Project Town: Colchester

State#: unk

FAP#: unk

Project: Rehab-Halls Hill

CLASSIFICATION	Hourly	Benefits
1) Boilermaker	33.79	34% + 8.96
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	35.72	33.16
2) Carpenters, Piledrivermen	33.53	25.66
2a) Diver Tenders	33.53	25.66
3) Divers	41.99	25.66
03a) Millwrights	34.94	26.19
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	51.0	21.80
4a) Painters: Brush and Roller	34.62	21.80
4b) Painters: Spray Only	36.62	21.80
4c) Painters: Steel Only	35.62	21.80
4d) Painters: Blast and Spray	37.62	21.80
4e) Painters: Tanks, Tower and Swing	36.62	21.80

Project: Rehab-Halls Hill

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)	40.0	27.67+3% of gross wage
6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection	36.67	35.77 + 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)	43.62	32.06
-----LABORERS-----		
8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	30.75	20.84
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	31.0	20.84
10) Group 3: Pipelayers	31.25	20.84
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	31.25	20.84
12) Group 5: Toxic waste removal (non-mechanical systems)	32.75	20.84
13) Group 6: Blasters	32.5	20.84
Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	31.75	20.84
Group 8: Traffic control signalmen	18.0	20.84
Group 9: Hydraulic Drills	29.3	18.90
-----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	32.98	20.84 + a
13b) Brakemen, Trackmen	32.01	20.84 + a
-----CLEANING, CONCRETE AND CAULKING TUNNEL-----		

As of: February 4, 2020

14) Concrete Workers, Form Movers, and Strippers	32.01	20.84 + a
15) Form Erectors	32.34	20.84 + a
----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:----		
16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers	32.01	20.84 + a
17) Laborers Topside, Cage Tenders, Bellman	31.9	20.84 + a
18) Miners	32.98	20.84 + a
----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----		
18a) Blaster	39.47	20.84 + a
19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	39.27	20.84 + a
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	37.29	20.84 + a
21) Mucking Machine Operator	40.06	20.84 + a
----TRUCK DRIVERS----(*see note below)		
Two axle trucks	29.51	24.52 + a
Three axle trucks; two axle ready mix	29.62	24.52 + a
Three axle ready mix	29.67	24.52 + a
Four axle trucks, heavy duty trailer (up to 40 tons)	29.72	24.52 + a
Four axle ready-mix	29.77	24.52 + a
Heavy duty trailer (40 tons and over)	29.98	24.52 + a

Project: Rehab-Halls Hill

Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	29.77	24.52 + a
<hr/>		
----POWER EQUIPMENT OPERATORS----		
<hr/>		
Group 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over, Tunnel Boring Machines. (Trade License Required)	40.97	24.80 + a
<hr/>		
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	40.64	24.80 + a
<hr/>		
Group 3: Excavator/Backhoe under 2 cubic yards; Cranes (under 100 ton rated capacity), 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)	39.88	24.80 + a
<hr/>		
Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper)	39.48	24.80 + a
<hr/>		
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	38.87	24.80 + a
<hr/>		
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	38.87	24.80 + a
<hr/>		
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	38.55	24.80 + a
<hr/>		
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24	38.2	24.80 + a
<hr/>		
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	37.79	24.80 + a
<hr/>		
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).	37.34	24.80 + a
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Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	35.24	24.80 + a
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Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	35.24	24.80 + a
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As of: February 4, 2020

Project: Rehab-Halls Hill

Group 12: Wellpoint Operator.	35.18	24.80 + a
Group 13: Compressor Battery Operator.	34.58	24.80 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	33.41	24.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	32.99	24.80 + a
Group 16: Maintenance Engineer/Oiler	32.32	24.80 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	36.76	24.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	34.26	24.80 + a

**NOTE: SEE BELOW

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

-

20) Lineman, Cable Splicer, Technician	48.19	6.5% + 22.00
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

As of: February 4, 2020

Project: Rehab-Halls Hill

27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20
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28) Material Men, Tractor Trailer Drivers, Equipment Operators	35.04	6.5% + 10.45
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As of: February 4, 2020

Project: Rehab-Halls Hill

Welders: Rate for craft to which welding is incidental.

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

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$4.00 premium in addition to the hourly wage rate and benefit contributions:

- 1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)**
- 2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson**

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

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

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.

As of: February 4, 2020

Project: Rehab-Halls Hill

~~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: February 4, 2020

**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.

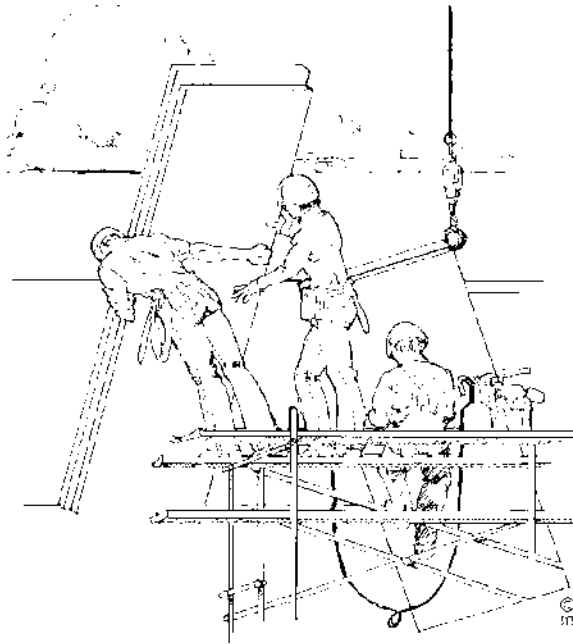
~NOTICE~

TO ALL CONTRACTING AGENCIES

Please be advised that Connecticut General Statutes Section 31-53, requires the contracting agency to certify to the Department of Labor, the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts.

Please find the attached “Contracting Agency Certification Form” to be completed and returned to the Department of Labor, Wage and Workplace Standards Division, Public Contract Compliance Unit.

 Inquiries can be directed to (860)263-6543.



CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION
CONTRACT COMPLIANCE UNIT

CONTRACTING AGENCY CERTIFICATION FORM

I, _____, acting in my official capacity as _____,
authorized representative title

for _____, located at _____,
contracting agency address

do hereby certify that the total dollar amount of work to be done in connection with
_____, located at _____,
project name and number address

shall be \$_____, which includes all work, regardless of whether such project
consists of one or more contracts.

CONTRACTOR INFORMATION

Name: _____

Address: _____

Authorized Representative: _____

Approximate Starting Date: _____

Approximate Completion Date: _____

Signature

Date

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

Date Issued: _____

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): _____

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/wgemenu.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.

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 J-1,2,3,4 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.

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker’s compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care _____ 4) Disability _____
- 2) Pension or retirement _____ 5) Vacation, holiday _____
- 3) Life Insurance _____ 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of _____,

I, _____ of _____, (hereafter known as Employer) in my capacity as _____ (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

- a) The records submitted are true and accurate;
- b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;
- c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);
- d) Each such person is covered by a worker’s compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;
- e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and
- f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such persons name first appears.

_____ Submitted on (Date)

(Signature) (Title)

[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS											Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109									
In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.											WEEKLY PAYROLL									
CONTRACTOR NAME AND ADDRESS: Landon Corporation, 15 Connecticut Avenue, Northford, CT 06472						SUBCONTRACTOR NAME & ADDRESS XYZ Corporation 2 Main Street Yantic, CT 06389					WORKER'S COMPENSATION INSURANCE CARRIER Travelers Insurance Company POLICY # #BAC8888928 EFFECTIVE DATE: 1/1/09 EXPIRATION DATE: 12/31/09									
PAYROLL NUMBER	Week-Ending Date	PROJECT NAME & ADDRESS									Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY
		DAY AND DATE							HOURS WORKED EACH DAY						FICA	WITH-HOLDING	WITH-HOLDING	LIST OTHER		
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/FEMALE AND RACE*	WORK CLASSIFICATION	S	M	T	W	TH	F	S	Total O/T Hours	TOTAL FRINGE BENEFIT PLAN CASH								
1	9/26/09	DOT 105-296, Route 82																		
Robert Craft 81 Maple Street Willimantic, CT 06226		M/C	Electrical Lineman E-1 1234567 Owner OSHA 123456		8	8	8	8	8		40	S-TIME \$ 30.75 Base Rate O-TIME \$ 8.82 Cash Fringe	1. \$ 5.80 2. \$ 3. \$ 2.01 4. \$ 5. \$ 6. \$	\$1,582.80				P-xxxx	\$1,582.80	#123 \$ xxx.xx
Ronald Jones 212 Elm Street Norwich, CT 06360	65%	M/B	Electrical Apprentice OSHA 234567		8	8	8	8	8		40	S-TIME \$ 19.99 Base Rate O-TIME \$ 16.63 Cash Fringe	1. \$ 2. \$ 3. \$ 4. \$ 5. \$ 6. \$	\$1,464.80	xx.xx	xxx.xx	xx.xx	G-xxx	\$1,464.80	#124 \$xxx.xx
Franklin T. Smith 234 Washington Rd. New London, CT 06320 SECTION B		M/H	Project Manager			8					8	S-TIME \$ Base Rate O-TIME \$ Cash Fringe	1. \$ 2. \$ 3. \$ 4. \$ 5. \$ 6. \$	\$1,500.00	xx.xx	xx.xx	xx.xx	M-xx.x		#125 xxx.xx
												S-TIME \$ Base Rate O-TIME \$ Cash Fringe	1. \$ 2. \$ 3. \$ 4. \$ 5. \$ 6. \$							

OSHA 10 ~ATTACH CARD TO 1ST CERTIFIED PAYROLL

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker's compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care Blue Cross 4) Disability _____
- 2) Pension or retirement _____ 5) Vacation, holiday _____
- 3) Life Insurance Utopia 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of 9/26/09,

I, Robert Craft of XYZ Corporation, (hereafter known as

Employer) in my capacity as Owner (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

- a) The records submitted are true and accurate;
- b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;
- c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);
- d) Each such employee of the Employer is covered by a worker's compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;
- e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and
- f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such employee's name first appears.

Robert Craft owner 10/2/09
 (Signature) (Title) Submitted on (Date)

Section B: Applies to CONNDOT Projects ONLY

That pursuant to CONNDOT contract requirements for reporting purposes only, all employees listed under Section B who performed work on this project are not covered under the prevailing wage requirements defined in Connecticut General Statutes Section 31-53.

Robert Craft owner 10/2/09
 (Signature) (Title) Submitted on (Date)

Note: CTDOL will assume all hours worked were performed under Section A unless clearly delineated as Section B WWS-CP1 as such. Should an employee perform work under both Section A and Section B, the hours worked and wages paid must be segregated for reporting purposes.

*****THIS IS A PUBLIC DOCUMENT***
 DO NOT INCLUDE SOCIAL SECURITY NUMBERS**



Opportunity * Guidance * Support



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.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions. (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof 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 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.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, 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.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

STATUTE 31-55a

- SPECIAL NOTICE -

To: All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement 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 Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. 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.

Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

TAB I

Commission On Human Rights And Opportunities (CHRO) Contract Compliance

Commission On Human Rights And Opportunities (CHRO) Contract Compliance

The contractor who is selected to perform this State project must comply with CONN. GEN. STAT. §§ 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of CONN. GEN. STAT. § 4a-60g. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

For municipal public works contracts and quasi-public agency projects, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at:

http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806

For Contracts Equal to or Greater than \$500,000.00

The contract cannot be awarded until:

The Contractor has submitted an approved Affirmative Action Plan to CHRO

OR

Authorization has been obtained from CHRO to execute contract and retain 2% per month of the total contract value until CHRO approves the Contractor's Affirmative Action Plan.

Non-Discrimination and Affirmative Action Provisions

(A)(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, sexual orientation, 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. 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 of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, 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; (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 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 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 sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to sections 46a-56, 46a-68e, 46a-68f and 46a-86; (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 section 46a-56.

(B) Any Contractor who is a party to a municipal public works contract or quasi-public agency project, where any such contract is valued at less than \$50,000 for each year of the contract, shall provide the Commission on Human Rights and Opportunities with a written or electronic representation that complies with the nondiscrimination agreement and warranty under subsection (A)(1) above, provided if there is any change in such representation, the Contractor shall provide the updated representation to the Commission not later than 30 days after such change. Any Contractor who is a party to a municipal public works contract or a quasi-public agency project, where any such contract is valued at \$50,000 or more for any year of the contract, shall provide the Commission with any one of the following: (1) Documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholder, managers, members or other governing body of such Contractor that

complies with the nondiscrimination agreement and warranty under subsection (A)(1) of this section; (2) Documentation in the form of a company or corporate policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of such contractor if (a) the prior resolution is certified by a duly authorized corporate officer of such contractor to be in effect on the date the documentation is submitted, and the executive director of the Commission on Human Rights and Opportunities or designee certifies that the prior resolution complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section; or (3) Documentation in the form of an affidavit signed under penalty of false statement by a chief executive officer, president, chairperson or other corporate officer duly authorized to adopt company or corporate policy that certifies that the company or corporate policy of the contractor complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section and is in effect on the date the affidavit is signed..

(C) If the Contract is a municipal public works contract or a quasi-public agency project, the Contractor agrees and warrants that s/he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works project. The Contractor shall include the provisions of subdivision (A)(1) of this section in every subcontract or purchase order entered into to fulfill any obligation of a municipal public works contract or contract for a quasi-public agency project, and such provisions shall be binding on a subcontractor, vendor or manufacturer, unless exempted by regulations or orders of the Commission on Human Rights and Opportunities. 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 section 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 regarding a state contract, 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.

(D) "Minority business enterprise" means any small contractor or supplier of materials fifty-one per cent 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 section 32-9n; and "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations. "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. Determination of the Contractor's good faith efforts shall include, but shall not be eliminated 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 on Human Rights and Opportunities may prescribe that are designed to ensure the participation of minority business enterprises in municipal public works contracts or quasi-public agency projects. "Municipal public works project" means that portion of an agreement entered into on or after October 1, 2015, between any individual, firm or corporation and a municipality for the construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, which is financed in whole or in part by the state, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees but excluding any project of an alliance district, as defined in section 10-262u, finance by the state funding in an amount equal to fifty thousand dollars or less. "Quasi-public agency project" means the construction, rehabilitation, conversion, extension, demolition or repair of a building or other changes or improvements in real property pursuant to a contract entered into on or after October 1, 2015, which is financed in whole or in part by a quasi-public agency using state funds, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in 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 Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) **Definition of Small Contractor**

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists.

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes ___ No ___ -Bidder is a minority business enterprise Yes ___ No ___ (If yes, check ownership category) Black ___ Hispanic ___ Asian American ___ American Indian/Alaskan Native ___ Iberian Peninsula ___ Individual(s) with a Physical Disability ___ Female ___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes___ No___
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes___ No___	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes___ No___
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes___ No___	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes___ No___
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes___ No___	9. Does your company have a mandatory retirement age for all employees? Yes___ No___
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes ___ No ___	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes ___ No ___ NA ___
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes ___ No ___	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes ___ No ___ NA ___
6. Does your company have a collective bargaining agreement with workers? Yes___ No___ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes___ No___ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes___ No___	12. Does your company have a written affirmative action Plan? Yes ___ No ___ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes ___ No ___ If yes, give name and phone number. _____

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)	3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source		
State Employment Service				Work Experience	
Private Employment Agencies				Ability to Speak or Write English	
Schools and Colleges				Written Tests	
Newspaper Advertisement				High School Diploma	
Walk Ins				College Degree	
Present Employees				Union Membership	
Labor Organizations				Personal Recommendation	
Minority/Community Organizations				Height or Weight	
Others (please identify)				Car Ownership	
				Arrest Record	
				Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
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TAB J

Plans (Under Separate Cover)

TAB K

Appendix

Town of Colchester Conservation Commission Permit
Town of Colchester Planning & Zoning Commission Notice of Decision
Right of Entry Permission Forms



Town of Colchester, Connecticut

127 Norwich Avenue, Colchester, Connecticut 06415

www.colchesterct.gov

Town of Colchester
127 Norwich Avenue
Colchester, CT 06415

NOTICE OF DECISION

December 17, 2018

Via Inter-Agency Delivery

RE: **#W2018-3029**- Town of Colchester, Applicant, Halls Hill Road, sidewalk improvements in Upland Review Area.

At the December 12, 2018 Regular Meeting, the Colchester Conservation Commission, approved application **#W2018-3029**.


The Commission approved application **#W2018-3029**, as the proposed sidewalk improvements did not include any direct wetland impacts in the project area. The impacts associated with the proposed improvements occur only within previously disturbed upland review areas and constitute a less than minimal environmental impact.

Proper erosion and sedimentation controls and techniques shall be used and maintained during construction activities, consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

The authorized activity must be initiated within five (5) years of issuance of this permit, December 12, 2018. This permit, if not previously revoked or specifically extended, shall become null and void on December 12, 2023.

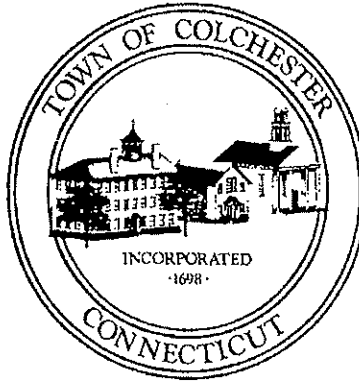
Should you have any questions regarding this notice of approval, please do not hesitate to contact me at (860) 537-7283, or you can also contact me via email at: jgigliotti@colchesterct.gov

Sincerely,


Jay Gigliotti
Wetlands Enforcement Officer
Town of Colchester

CC: Art Shilosky, Colchester First Selectman
Sal Tassone, Town Engineer
Jame Paggioli, Public Works Director
Colchester Planning & Zoning Commission
File

Code Administration
Building Official
Fire Marshal
Wetlands Enforcement



Planning and Zoning
Planning Director
Zoning Enforcement
Town Engineer

Notice of Decision

Art Shilosky, First Selectman
Town of Colchester
127 Norwich Ave.
Colchester, CT 06415

January 8, 2019

RE: CGS#2018-052- Halls Hill Road Reconstruction Project

The above referenced referral was reviewed by the Planning & Zoning Commission at their regular meeting held on January 2, 2019. A Public Hearing was held where a Public Notice was placed in the Rivereast newspaper on December 14, 2018 and December 21, 2018. All of the property owners of Halls Hill Road were also served a Notice of the Public Hearing to be held on January 2, 2019 via Certified mail. The Commission was unanimous in their support of a resolution to forward a favorable report on this proposal pursuant to CGS 8-24.

The Notice of Decision will be published in the Rivereast News Bulletin on Friday January 11, 2019.

Respectfully,

A handwritten signature in cursive script that reads "Randall Benson".

Randall Benson,
Town Planner

**RIGHT OF ENTRY
REHABILITATION OF HALLS HILL ROAD
February 5, 2019**

I, Donald Tedford, current owner of the property located at .

156 Hall Hill Road in Colchester, CT give the Town of Colchester and their

Contractor, permission to enter onto my property during the construction of the

REHABILITATION OF HALLS HILL ROAD to complete the following work on my property

as shown on the attached sketch:

 Reconstruct portion of bituminous driveway;

 X Remove existing concrete sidewalk;

 X Disturb lawn area and reseed.

Any temporary materials installed will be removed after construction is complete and the disturbed areas will be restored to their existing conditions.

Donald Tedford
Signature

2-6-2019
Date

**RIGHT OF ENTRY
REHABILITATION OF HALLS HILL ROAD
February 5, 2019**

I, David Gideon, current owner of the property located at _____

_____ 320 Hall Hill Road in Colchester, CT give the Town of Colchester and their

Contractor, permission to enter onto my property during the construction of the

REHABILITATION OF HALLS HILL ROAD to complete the following work on my property

as shown on the attached sketch:

Reconstruct portion of bituminous driveway;

Remove existing concrete sidewalk;

Disturb lawn area and reseed.

Any temporary materials installed will be removed after construction is complete and the disturbed areas will be restored to their existing conditions.

David Gideon
Signature

2-6-19
Date