

PROJECT SPECIFICATIONS
for
REHABILITATION OF BRIDGE 05535
WEST CENTER STREET OVER
EIGHT MILE RIVER



Bid # 2016-1013

Garry Brumback, Town Manager

October 27, 2016

By
Town of Southington
Engineering Department

196 North Main Street
Southington, CT 06489
(860) 276-6231

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**Rehabilitation of Bridge 05535
West Center Street Over
Eight Mile River
SOUTHINGTON, CONNECTICUT
LEGAL NOTICE
INVITATION TO BID**

Sealed bids for the Rehabilitation of Bridge 05535 West Center Street over Eight Mile River will be received at the Southington Town Hall, Office of the Town Manager, 75 Main Street, until **December 1, 2016 at 2:00 p.m.** after which time they will be publicly opened and read aloud.

The work consists of replacement of the existing superstructure, light modification of the existing substructure, reconstruction of the approach roadway and roadside safety improvements to Bridge 05535 West Center Street over Eight Mile River from 250 feet west of Bridge to 350 feet east of Bridge.

The Town of Southington hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation, and that they will not be discriminated against on the grounds of race, color, national origin or sex, in consideration for this award.

Plans and specifications for the above project may be *reviewed* at the Southington Engineering Office located at the Municipal Center, 196 North Main Street Southington. Copies of the contract documents may be obtained on the Town of Southington's website, www.southington.org as well as on the State of Connecticut Portal.

A pre-bid meeting will be held at the project site on Tuesday, November 8, 2016 at 1:00 p.m. Attendance is not mandatory; however, a report of meeting will not be provided to bidders.

All bidders are required to inform themselves fully of the conditions relating to the construction and labor under which the work will be or is now being performed and the Contractor shall employ, as far as possible, such methods and means in the carrying out of this work as will not cause interruption or interference with any other contractor.

Bid security in the form of a certified check or a bid bond, on form furnished by the Town of Southington for 10% of the amount of the bid, must accompany each proposal. The Town of Southington reserves the right to reject any and all bids.

Performance and Payment Bonds, in the full amount of the Contract price, will be required of the Successful Bidder.

This contract is subject to state contract compliance requirements, including non-discrimination statutes and set-aside requirements. State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract be set aside for award to subcontractors holding current certification from the Connecticut Department of Administrative Services. The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

Prime contractors must be prequalified with ConnDOT for the work to be performed.

TOWN OF SOUTHINGTON, CONNECTICUT
Keith Hayden, P.E. Director
of Public Works

BID INSTRUCTIONS AND GENERAL CONDITIONS

1. "Town" refers to the Town of Southington. "Town Engineer" refers to the Town Engineer or his representative. "Contractor" refers to successful bidder (company contracted by Town to perform work under this contract).
2. A pre-bid meeting will be held at the project site on Tuesday, November 8, 2016 at 1:00 p.m. Attendance is not mandatory; however, a report of meeting will not be provided to bidders.
3. Bids must be made on the attached bid form and shall be enclosed in a sealed envelope which shall be labeled with the bidder's name and address in the upper left-hand corner and which shall be entitled "Rehabilitation of Bridge 05535 West Center Street Over Eight Mile River". Sets may be obtained at the Town of Southington's website at www.southington.org, as well as the State Portal. Any addenda will be available on the State of Connecticut Portal.
4. Bids shall be received at the office of the Southington Town Manager at the Southington Town Hall, 75 Main Street, Southington, Connecticut, December 1, 2016 at 2:00 p.m. and then at said office publicly opened and read aloud. The award shall be made at a later date by the Town.
5. Each bidder's proposal shall include, completed in full, ***the Bid Proposal Form, the bidder's Project References, the Equipment List, the Non Collusion Affidavit, the New Vendor Disclosure Statement, and the Bid Bond***, and any other specifications pages requiring vendor response shall be enclosed in an envelope which shall be sealed and clearly labeled with the words **"Bid Proposal, Rehabilitation of Bridge 05535 West Center Street Over Eight Mile River, the Bidder's Name, and the Date and Time of the Bid Opening,"** in order to guard against premature opening of the bid.
6. Bids must be made out and signed in the name of the person or business entity which shall perform the work, and if a corporation, it must be fully and properly executed by a person authorized to act on behalf of the corporation.
7. Bids received later than the time and date specified shall not be considered. Bidders are cautioned that it is the responsibility of each individual bidder to assure that his bid is in the possession of the responsible official or his designated alternate prior to the stated time and at the place of the Bid Opening. Owner is not responsible for bids delayed by mail and/or delivery services, of any nature.
8. Bids may be withdrawn prior to the time set for opening bids, but bids may not be re-filed after they have been withdrawn.
9. Unbalanced bids shall not be considered in awarding contract.
10. The minimum rates to be paid labor at the various classifications shall be in accordance with current schedule of wages established by the State Labor Commissioner as provided in the General Statutes of Connecticut, as revised.
11. The successful bidder will be determined from the lowest, qualified, reasonable, and responsible base bid amount. The Town of Southington shall determine what constitutes qualified, reasonable, and responsible.
12. The Town of Southington reserves the right to reject any or all bids, and to waive informalities or technical defects.

13. Goods and services provided to the Town of Southington are exempt from Federal Excise Taxes and the Sale and Use Tax of the State of Connecticut.
14. Bids must be accompanied by a surety bond in the amount of ten percent (10%) of the total bid price payable to the Town of Southington. The bond shall be in the form of a certified check or Bid Bond. Said bond shall be returned to the unsuccessful bidders upon award of the contract or, if no award has been made, within ninety (90) days after the opening of bids. If the successful bidder fails to execute the contract and furnish the required bonds including insurance coverage within fourteen (14) calendar days after he has received notice of the acceptance of the bid, the bond shall be forfeited to the Town. Upon receipt of a payment bond, and a performance bond from the successful bidder, said bond shall be returned.
15. The bidder agrees that this bid shall remain open for acceptance for ninety (90) days after the opening and no bidder may withdraw his bid within said time period.
16. The successful bidder must furnish a performance bond and a payment bond in the amount of the contract price. The bonds shall be executed by the bidder as principal with a surety satisfactory to the Town, as well as a New Vendor Form and W-9 form.
17. The successful bidder shall secure and maintain such insurance as shall protect him from claims under Workers' Compensation Acts. He shall secure and maintain general liability injury, death or property damage, which may arise from the performance of his service under this contract in the amounts specified in the Special Provisions. He shall designate the Town as an additional named insured in his general liability policy, and shall furnish the Town with a certificate or other proof of insurance which he, as part of this contract, must carry. The provisions of this paragraph shall apply to and be incorporated into any subcontracts regarding this project between the successful bidder and his subcontractors.
18. 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

19. The Town shall not award this contract unless the Contractor furnishes satisfactory evidence of his/her ability and experience to perform this work and to complete it within the time specified in the contract. As part of this proposal, the Contractor and Subcontractors shall complete the attached Project References, which shall describe similar and successfully completed jobs. Relevance to the proposed job shall be determined by the Town. The name, address and telephone number of a contact person involved with each of these projects must be included so that they can be contacted prior to executing a contract.

20. The successful bidder shall indemnify and hold harmless the Town against any liability arising out of negligent acts, errors, or omissions of the bidder, his employees or agents.
21. The successful bidder must be prepared to execute the contract within fourteen (14) calendar days after receipt of notice of the award of the contract.
22. Immediately after execution and delivery of the contract, and prior to commencing work, the Contractor shall provide the Southington Engineering Department a construction project schedule showing proposed dates of commencement and completion of each of the various components of work required under this Contract. The successful bidder must be prepared to commence work within fourteen (14) days after notice to proceed from the Town. The approximate project schedule is as follows:

| | |
|-------------------|---|
| December 1, 2016 | Bid Opening |
| December 15, 2016 | Notice of Award |
| December 29, 2016 | Contract signing/ Notice to Proceed from Town |
| April 1, 2017 | Begin work |
| November 30, 2017 | Contract completion date |

23. If the contractor is delayed in the completion of the work by changes ordered in the work, or by weather conditions, strikes, lockouts, fire, unusual delay by common carriers or other causes beyond the contractor's control, he shall make a written request for an extension of time within which the contract may be completed. Such request shall be submitted to the Town not less than ten (10) days before the date on which the work described in the contract is to be completed. Any such extension shall be in writing, and signed by the Town's representative.
24. Upon completion of the project, the contractor shall submit a statement (minus retainage) for payment which shall be paid within fifteen (15) days after approval of same by the Town Manager and following receipt of all lien waivers. Acceptance of such payment by the contractor shall constitute a release of all claims against the Town arising under or by virtue of this contract except such claims, if any, as may be specifically exempted from the operations of the release by the contractor in his statement for payment.
25. The Town shall retain an amount equal to two percent (2%) of the final contract price for one year from time of contract completion. This retainage shall serve as a one year guarantee on all work associated with this contract and shall be used to correct any construction deficiencies which may arise for one year following completion of this contract.
26. Prior to final payment, the contractor shall provide the Town with lien waivers verifying payment to all subcontractors for amounts due, whether for labor performed or materials furnished, when either is associated with this contract.
27. The General Contractor shall include in each of its subcontracts a provision requiring each subcontractor to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within 30 days after such labor performed or for materials furnished.
28. The Town Engineering Department or its representative shall perform all construction inspection. The contractor is to notify the Town Engineer of any discrepancies as they arise, and proceed as directed.

29. The Town Engineering Department or its representative must be given 24 hours notice to complete inspection. Notice applies to consecutive Town recognized work days. Inspectors are not available on weekends and Town approved holidays. Activities requiring Town inspections (i.e. paving, concrete pours, backfilling, etc.) must be accomplished when inspectors are available. **It is the contractor's responsibility to verify holidays and no-inspection coverage ahead of time.**
30. The contractor agrees that the Town may make changes to the plans for the work that may be deemed necessary during the progress of work. The Town may also change the amount of work to be performed under this contract without invalidating this contract. If any such changes are made, they shall be made by written change order signed by the Town's representative. If such changes affect work for which a lump sum price is fixed, the written change order shall specify the amount by which the lump sum shall be increased or decreased. If such changes affect work for which a unit price is set, payment for such work shall be based on measured final quantities and not estimated quantities. Final measured quantities shall be based on pay limits as established by the plans and specifications for this contract. There shall be no adjustment of the *unit prices* if final measured quantities vary from the estimated quantities.
31. The contractor is responsible for horizontal and vertical control and layout as may be required for the installation of the improvements.
32. The "State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction Form 817" (2016) or the latest revision is hereby made part of the contract documents. Unless otherwise indicated in this Bid Document, "Description," "Materials," "Construction Methods," "Method of Measurement," and "Basis of Payment" for all items shall conform to Form 817 (2016) or latest revision.
33. The Contractor is responsible for locating all underground utilities by notifying "Call Before You Dig" in compliance with Public Act 77-350 and 81-146.
34. Maintenance and protection of traffic is the Contractor's responsibility. The contractor must meet with the Town Engineer or his representative prior to the start of any construction activity associated with this project in order to discuss procedures concerning maintenance and protection of traffic and project construction sequencing.
35. The Contractor shall satisfy all the requirements and conditions as listed in the Specifications section of this Invitation to bid.
36. The Contractor shall assume all liability for claims resulting from damage or injury associated with this project including the maintenance and protection of traffic.
37. Should a dangerous or potentially unsafe condition arise affecting pedestrian or vehicular traffic, the Contractor shall immediately stop the project, make every reasonable effort to correct the situation, and notify the Town Engineer or the police if warranted.
38. The Contractor shall be required to provide traffic control personnel to direct traffic when working in the road.
39. The Contractor shall not discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age, or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin. (See Appendix B)

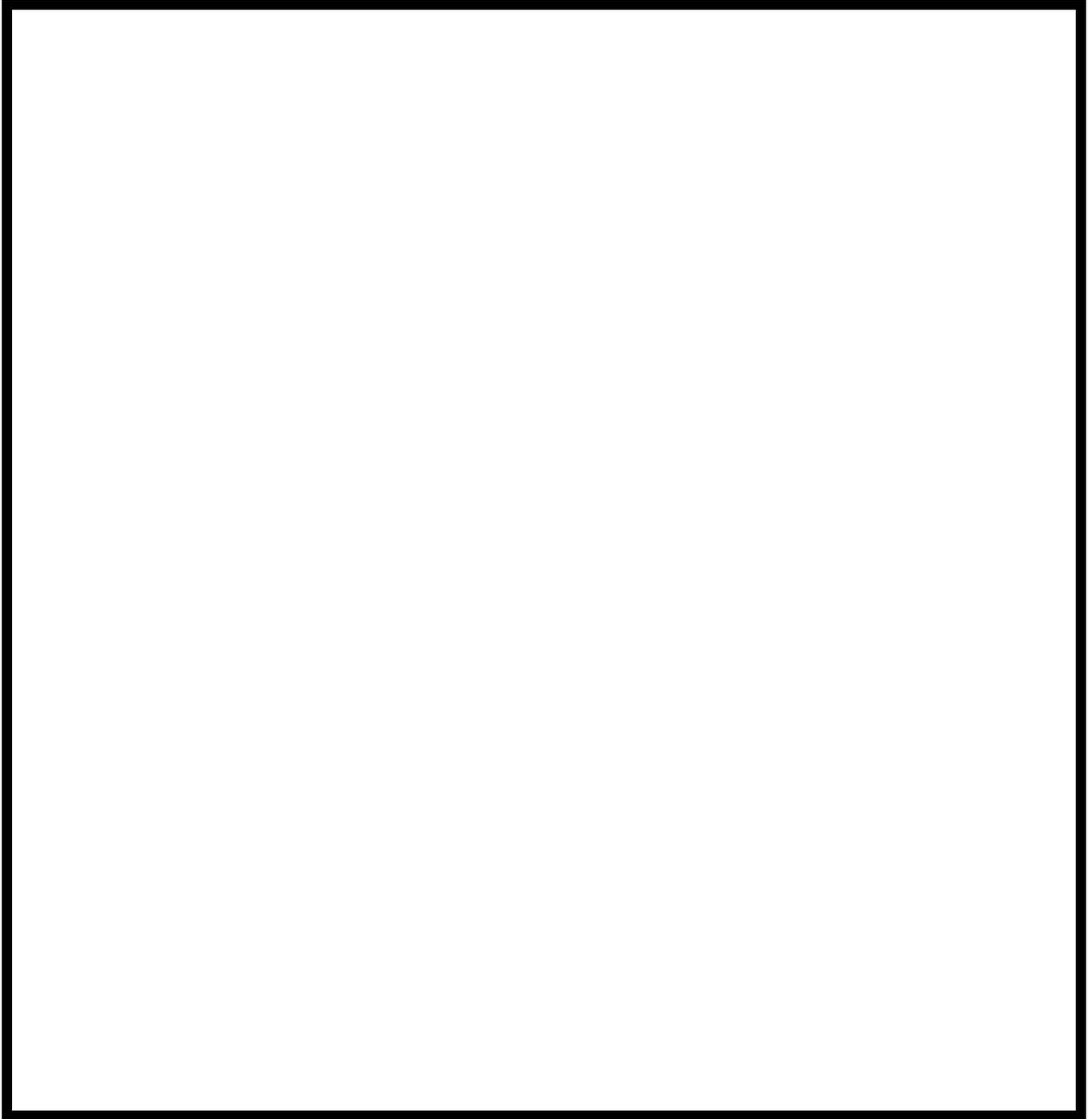
40. Title VI requirements necessitate the availability of translators for those with limited English proficiency. All contractors who have contracted with the Town of Southington shall be responsible to maintain this policy during the contractual relationship. The contractor shall also maintain this policy in dealing with its subcontractors and the Town Attorney's Office has the right to review with any contractor the adherence to this policy whether through the master contract or a subcontractor. If any prospective contractor requires any assistance for language purposes, please contact:

| | |
|----------|---------------------------------|
| Spanish: | Ralph/Aida Diaz at 860-276-8875 |
| Polish: | Walter Kizilski at 860-621-2155 |
| Italian: | Tina Riccio at 860-621-9148 |

END OF INSTRUCTIONS AND GENERAL CONDITIONS

EQUIPMENT LIST

List below all equipment that shall be used to complete the project described in this price proposal form. This list must be complete; describe all equipment as to type and size. The following forms must be submitted with the Price Proposal Form.

A large, empty rectangular box with a thick black border, intended for the user to list all equipment to be used for the project. The box is currently blank.

PROJECT REFERENCES

| Name/Address/Telephone | Description of Work |
|------------------------|---------------------|
| | |
| | |
| | |

(Please attach additional sheets if necessary.)

BID BOND

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)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bond 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

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title

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

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: (1) Above addresses are to be used for giving required notice.
(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

EJCDC NO. 1910-28-C (1996 Edition) 00410-1

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.
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 and 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 Lewis & Clark County, Helena, Montana.
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. An 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 the 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.

SWORN STATEMENT BY SUCCESSFUL BIDDER

Title 23. United States Code, Section 112 (f)

Each bidder shall file a statement executed by, or on behalf of the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. Failure to submit the executed statement as part of the bidding documents will make the bid non-responsive and not eligible for award consideration.

NON COLLUSION AFFIDAVIT

This entire document must be completed, notarized and attached to your bid proposal. Failure to do so will result in the rejection of your Bid.
A separate affidavit must be submitted by each principal of a Joint Venture.

TOWN OF SOUTHTON

Rehabilitation of Bridge 05535 West Center Street Over Eight Mile River

I, _____, acting in behalf of
(Name of Person Signing Affidavit)

_____ of which I am (the) (a)
(Name of Bidder i.e. Person or Organization)

_____, submitting a bid for the above project, certify and affirm in accordance
(Title)

with Part 635.112 of Title 23, U.S. Code of Federal Regulations, that the

_____ has neither directly or indirectly entered into
(Name of Bidder i.e. Person or Organization)

any agreements, participated in any collusion nor otherwise taken any action in restraint of free competitive bidding in connection with such bid. False statement made herein may be the subject of criminal prosecution.

(Name of Bidder i.e. Person or Organization)

Signature and Title of Official

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

Notary Public/Commissioner of the Superior Court
My Commission Expires _____

Certificate of Authority

I, _____, certify that I am (the) (a) _____ of the
(Name) (Title)

organization named in the foregoing instrument; that I have the authority to affix the seal of the Organization to such papers

that require the seal; that _____, who signed said
(Name)

instrument on behalf of the Organization was then (the) (a) _____
(Title)

of said Organization; that said instrument was duly signed for and in behalf of said Organization by authority of its governing body and is within the scope of its organizational powers.

_____ (Corporate Seal, if applicable)
Signature of Certifying Person

The person signing the Certificate of Authority portion of this form cannot execute the upper portion of this Affidavit.

INSURANCE REQUIREMENTS

The successful bidder shall secure and maintain such insurance as follows:

Workers' Compensation

- | | |
|--------------------------|---|
| 1. Workers' Compensation | as required by the laws of the State of Connecticut |
| 2. Employer's Liability | \$1,000,000 |

Contractor's Liability

- | | |
|--|-------------|
| 1. General Aggregate <i>Except products-completed operations</i> | \$3,000,000 |
| 2. Products-Completed Operations <i>Aggregate</i> | \$1,500,000 |
| 3. Personal and Advertising Injury <i>Per person/organization</i> | \$1,500,000 |
| 4. Each Occurrence <i>Bodily injury and property damage</i> | \$1,500,000 |
| 5. Property Damage Liability <i>Including collapse and underground coverages. If blasting is to be used, also include explosion coverage.</i> | \$1,500,000 |

Automobile Liability

- | | |
|-------------------|-------------|
| 1. Bodily Injury: | |
| Each Person | \$1,000,000 |
| Each Accident | \$1,000,000 |
| Property Damage: | |
| Each Accident: | \$1,000,000 |

Or

- | | |
|---|-------------|
| 2. Combined Single Limit <i>Bodily injury and property damage:</i> | |
| Each Accident | \$2,000,000 |

Contractual Liability

- | | |
|--|-------------|
| 1. General Aggregate | \$3,000,000 |
| 2. Each Occurrence <i>Bodily injury and property damage</i> | \$1,500,000 |

The CONTRACTOR shall also provide:

1. CONTRACTOR shall, as a minimum, purchase and maintain excess liability insurance in the umbrella form with a combined single limit of not less than \$5,000,000 per claim and in the aggregate. Evidence of such excess liability shall be delivered to OWNER in accordance with 2.05C in the form of a certificate indicating the policy numbers and limits of liability of all underlying insurance.
2. If the aggregate limits of liability indicated in CONTRACTOR insurance provided herein are not sufficient to cover all claims for damages arising from his operations under this Contract and from any other work performed by him or if policies of insurance do not provide that the aggregate limits of liability for bodily injury and property damage apply to each contract or project separately, CONTRACTOR shall have such policies amended so that the aggregate limits of liability required by this Contract will be available to cover all claims for damages due to operations under this contract.
3. CONTRACTOR shall purchase and maintain a separate Owner's Protective Liability policy, issued to OWNER at the expense of CONTRACTOR, including OWNER and ENGINEER as named "additional insured". This insurance shall provide coverage for not less than the following amounts:

Bodily Injury:

| | |
|-----------------|-------------|
| Each Occurrence | \$1,000,000 |
|-----------------|-------------|

Property Damage:

| | |
|-----------------|-------------|
| Each Occurrence | \$1,000,000 |
|-----------------|-------------|

| | |
|------------------|-------------|
| Annual Aggregate | \$3,000,000 |
|------------------|-------------|

- A. CONTRACTOR shall purchase and maintain property insurance upon the Work at the site in the amount of the total insurable value of all structures, materials, and equipment to be built and installed. This insurance shall:
 1. Include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, and ENGINEER'S Consultants, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
 2. Be written as Builder's Risk Insurance with an "All Risk" Installation Floater that shall at least include insurance for physical loss and damage to the Work, temporary buildings, false work and Work in transit and shall insure against at least the following perils: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, and water damage and be written in the completed value form.
 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 in transit for incorporation in the Work or 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; and
5. Be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with thirty days written notice to each other additional insured to whom a certificate of insurance has been issued.

The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this section shall comply with requirements of GC-5.06C.

BID PROPOSAL FORM

The Town of Southington, herein called the Owner, acting by and through its Town Manager, for Proposed **“Rehabilitation of Bridge 05535 West Center Street Over Eight Mile River.”**

The Undersigned, as bidder, herein referred to as singular and masculine, declares as follows:

The only parties interested in this BID as Principals are named herein;

this bid is made without collusion: with any other person, firm, or corporation;

no officer, agent, or employee of the Owner is directly or indirectly interested in this BID;

he has carefully examined the site of the proposed Work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed Work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this BID, and he has carefully read and examined Drawings, the annexed proposed AGREEMENT and the Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;

he understands that information relative to subsurface and other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) has been furnished only for his information and convenience without any warranty or guarantee, expressed or implied, that the subsurface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) actually encountered will be the same as those shown on the Drawings or in any of the other Contract Documents and he agrees that he shall not use or be entitled to use any such information made available to him through the Contract Documents or otherwise or obtained by him in his own examination of the site, as a basis of or ground for any claim against the Owner or the Engineer arising from or by reason of any variance which may exist between the aforesaid information made available to or acquired by him and the subsurface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) actually encountered during the construction work, and he has made due allowance therefore in this BID;

and he understands that the quantities of work tabulated in this BID or indicated on the Drawings or in the Specifications or other Contract Documents are only approximate and are subject to increase or decrease as deemed necessary by the Engineer;

and he agrees that, if this bid is accepted he will contract with the Owner, as provided in the copy of the Contract Documents deposited in the office of the Engineer, this BID form being part of said Contract Documents, and that he will perform all the work and furnish all the materials and equipment, and provide all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other things required by the Contract Documents in the manner and within the time therein prescribed and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the lump sum or unit price applicable to each item of the Work as stated in the schedule below.

(Note: All entries in the entire BID must be made clearly and in ink; price bid must be written in both words and figures.)

Note: Bidders must bid on each item. All entries in the entire BID must be made clearly and in ink; prices bid must be written in both words and figures.)

(Bidders should insert extended item prices obtained from quantities and unit prices.)

A= Special Provision Provided

Rehabilitation of Bridge 05535 West Center Street Over Eight Mile River

| ConnDOT Item # | | Item Name | Unit | Qty | Unit Price | Total Price |
|----------------|---|--|------|-------|------------|-------------|
| 0201001 | | CLEARING AND GRUBBING | LS | 1 | | |
| 0202000 | | EARTH EXCAVATION | c.y. | 695 | | |
| 0202100 | | ROCK EXCAVATION | c.y. | 76 | | |
| 0202529 | | CUT BITUMINOUS CONCRETE PAVEMENT | l.f. | 316 | | |
| 0209001 | | FORMATION OF SUBGRADE | s.y. | 2,020 | | |
| 0212000 | | SUBBASE | c.y. | 340 | | |
| 0213100 | | GRANULAR FILL | c.y. | 5 | | |
| 0219001 | | SEDIMENTATION CONTROL SYSTEM | l.f. | 1,010 | | |
| 0219011 | A | SEDIMENT CONTROL SYSTEM AT CATCH BASIN | ea. | 3 | | |
| 0305001 | | PROCESSED AGGREGATE | c.y. | 100 | | |
| 0406171 | | HMA S0.5 | ton | 472 | | |
| 0406236 | | MATERIAL FOR TACK COAT | gal | 202 | | |
| 0406275 | A | FINE MILLING OF BITUMINOUS CONCRETE (0" TO 4") | s.y. | 242 | | |
| 0703012 | | MODIFIED RIPRAP | c.y. | 8 | | |
| 0815200 | | BITUMINOUS CONCRETE PARK CURBING | l.f. | 665 | | |
| 0910170 | | METAL BEAM RAIL (TYPE R-B 350) | l.f. | 275 | | |
| 0910890 | | R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET | ea. | 4 | | |
| 0912499 | | REMOVE CABLE GUIDE RAIL | l.f. | 365 | | |
| 0922501 | | BITUMINOUS CONCRETE DRIVEWAY | s.y. | 131 | | |
| 0943001 | | WATER FOR DUST CONTROL | m.ga | 144 | | |
| 0943002 | | SWEEPING FOR DUST CONTROL | hr | 128 | | |
| 0944000 | | FURNISHING AND PLACING TOPSOIL | s.y. | 910 | | |
| 0950005 | | TURF ESTABLISHMENT | s.y. | 910 | | |
| 0969060 | A | CONSTRUCTION FIELD OFFICE, SMALL | mo. | 8 | | |
| 0970006 | A | TRAFFICPERSON (MUNICIPAL OFFICER) | Est. | 1 | 100,000 | 100,000 |
| 0970007 | A | TRAFFICPERSON (UNIFORMED FLAGGER) | hr | 1,280 | | |
| 0971001 | A | MAINTENANCE AND PROTECTION OF TRAFFIC | LS | 1 | | |
| 0975004 | | MOBILIZATION AND PROJECT CLOSEOUT | LS | 1 | | |

| ConnDOT Item # | | Item Name | Unit | Qty | Unit Price | Total Price |
|----------------|---|---|------|-------|------------|-------------|
| 0980001 | | CONSTRUCTION STAKING | LS | 1 | | |
| 0205001 | | TRENCH EXCAVATION 0'-4' DEEP | c.y. | 11 | | |
| 0205002 | | ROCK IN TRENCH EXCAVATION 0'-4' DEEP | c.y. | 2 | | |
| 0507006 | | TYPE "C" CATCH BASIN TOP | ea. | 1 | | |
| 0507224 | | TYPE "C-L" CATCH BASIN TOP | ea. | 1 | | |
| 0507771 | | RESET CATCH BASIN | ea. | 2 | | |
| 0507781 | | RESET MANHOLE | ea. | 4 | | |
| 0651001 | | BEDDING MATERIAL | c.y. | 2 | | |
| 0651012 | | 15" R.C. PIPE | l.f. | 8 | | |
| 0822001 | | TEMPORARY PRECAST CONCRETE BARRIER CURB | l.f. | 240 | | |
| 0822002 | | RELOCATED TEMPORARY PRECAST CONCRETE BARRIER CURB | l.f. | 80 | | |
| 0976002 | | BARRICADE WARNING LIGHTS - HIGH INTENSITY | day | 1,464 | | |
| 0978002 | | TRAFFIC DRUM | ea. | 36 | | |
| 0979003 | | CONSTRUCTION BARRICADE TYPE III | ea. | 1 | | |
| 0981100 | | 42" TRAFFIC CONE | ea. | 72 | | |
| 1118051 | A | TEMPORARY SIGNALIZATION (SITE NO. 1) | LS | 1 | | |
| 1205207 | | TYPE DE-7 DELINEATOR | ea. | 8 | | |
| 1205215 | | TYPE DE-7B DELINEATOR | ea. | 16 | | |
| 1208928 | | SIGN FACE - SHEET ALUMINUM (TYPE III REFLECTIVE SHEETING) | s.f. | 3 | | |
| 1209114 | | HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" YELLOW | l.f. | 1,950 | | |
| 1209124 | | HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" WHITE | l.f. | 2,940 | | |
| 1209129 | | HOT-APPLIED PAINTED PAVEMENT MARKINGS 12" WHITE | l.f. | 86 | | |
| 1210101 | | 4" WHITE EPOXY RESIN PAVEMENT MARKINGS | l.f. | 1,680 | | |
| 1210102 | | 4" YELLOW EPOXY RESIN PAVEMENT MARKINGS | l.f. | 1,680 | | |
| 1220013 | | CONSTRUCTION SIGNS - BRIGHT FLUORESCENT SHEETING | s.f. | 163 | | |
| 1807012 | | TEMPORARY IMPACT ATTENUATION SYSTEM TYPE A MODULE 700 LB | ea. | 2 | | |
| 1807013 | | TEMPORARY IMPACT ATTENUATION SYSTEM TYPE A MODULE 1400 LB | ea. | 8 | | |
| 1807014 | | TEMPORARY IMPACT ATTENUATION SYSTEM TYPE A MODULE 2100 LB | ea. | 4 | | |
| 1807101 | | RELOCATION OF TEMPORARY IMPACT ATTENUATION SYSTEM TYPE A | ea. | 2 | | |
| 1301765 | A | FURNISHING AND INSTALLING 12" WATER MAIN | LS | 1 | | |
| 1301768 | A | FURNISHING AND INSTALLING 12" WATER MAIN ON BRIDGE | LS | 1 | | |

| ConnDOT Item # | | Item Name | Unit | Qty | Unit Price | Total Price |
|----------------|---|---|------|--------|------------|-------------|
| 0203000 | | STRUCTURE EXCAVATION - EARTH (COMPLETE) | c.y. | 75 | | |
| 0216000 | | PERVIOUS STRUCTURE BACKFILL | c.y. | 100 | | |
| 0406171 | | HMA S0.5 | ton | 46 | | |
| 0406173 | | HMA S0.25 | ton | 23 | | |
| 0503001 | A | REMOVAL OF SUPERSTRUCTURE | LS | 1 | | |
| 0508050 | | SHEAR CONNECTORS | ea. | 592 | | |
| 0509001 | | WELDED STUDS | ea. | 12 | | |
| 0520036 | A | ASPHALTIC PLUG EXPANSION JOINT SYSTEM | c.f. | 38 | | |
| 0521021 | A | STEEL-LAMINATED ELASTOMERIC BEARINGS | c.i. | 3,150 | | |
| 0601000 | | CLASS "A" CONCRETE | c.y. | 51 | | |
| 0601201 | | CLASS "F" CONCRETE | c.y. | 165 | | |
| 0602000 | | DEFORMED STEEL BARS | lb. | 14,000 | | |
| 0602006 | | DEFORMED STEEL BARS - EPOXY COATED | lb. | 34,000 | | |
| 0602890 | | DOWEL BAR SPLICER SYSTEM | ea. | 32 | | |
| 0602891 | | DOWEL BAR SPLICER SYSTEM - EPOXY COATED | ea. | 506 | | |
| 0602936 | A | DRILLING AND GROUTING REINFORCING BARS | l.f. | 285 | | |
| 0603061 | | STRUCTURAL STEEL (SITE NO. 1) | LS | 1 | | |
| 0603591 | A | STRUCTURAL STEEL - MISCELLANEOUS | cwt. | 1 | | |
| 0612994 | | CONCRETE CYLINDER CURING BOX | ea. | 1 | | |
| 0707009 | A | MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC) | s.y. | 416 | | |
| 0708001 | | DAMPPROOFING | s.y. | 55 | | |
| 0714050 | | TEMPORARY EARTH RETAINING SYSTEM | s.f. | 200 | | |
| 0822005 | A | TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE) | l.f. | 160 | | |
| 0904487 | A | METAL BRIDGE RAIL (HANDRAIL) | l.f. | 140 | | |
| 0974001 | A | REMOVAL OF EXISTING MASONRY | c.y. | 35 | | |
| | | TOTALS | | | | |

TOTAL BID:

\$ _____ dollars

and _____ cents (\$ _____)

Contractor: _____

The Undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the annexed form of AGREEMENT, he will accept compensation as stipulated therein in full payment for such extra work.

If this BID is accepted by the Owner, the undersigned agrees to complete the entire work provided to be done under the Contract within the time stipulated in the AGREEMENT.

As provided in the INSTRUCTION TO BIDDERS, the bidder hereby agrees that he will not withdraw his BID within 90 consecutive calendar days after the actual date of the opening of BIDS and that, if the Owner shall accept this BID, the bidder will duly execute and acknowledge the AGREEMENT and furnish, duly executed and acknowledged, the required CONTRACT BONDS within ten (10) days after notification that the AGREEMENT and other Contract Documents are ready for signature.

Should the bidder fail to fulfill any of his agreement as hereinabove set forth, the Owner shall have the right to retain as liquidated damages the amount of the bid check which shall become the Owner's property. If a bid bond was given, it is agreed that the amount thereof shall be paid as liquidated damages to the Owner by the Surety.

This BID includes Addenda number _____(To be filled in by Bidder if Addenda is issued.)

The bidder, by submittal of this BID agrees with the Owner that the amount of the bid security deposited with the BID fairly and reasonably represents the amount of damages the Owner will suffer due to the failure of the bidder to fulfill his agreements as above provided.

(SEAL) _____ L.S.
(Name of Bidder)

By _____
(Signature and title of authorized representative)

(Business address)

(City and State)

Date

The bidder is a corporation incorporated in the State (or Commonwealth) of _____ - a partnership- an individual. (Bidder must add and delete as necessary to make this sentence read correctly.)

The required names and addresses of all persons interested in the foregoing BID, as Principals, are as follows:

The bidder is requested to state below what heavy highway including rock excavation and culvert work of a similar character to that included in the proposed Contract he has done and to give references that will enable the Owner to judge his experienced, skill, and business standing (provide contact name for project and telephone number).

(Add supplementary page if necessary.)

END OF SECTION

AGREEMENT
TOWN OF SOUTHLINGTON, CONNECTICUT
REHABILITATION OF BRIDGE 05535 WEST CENTER STREET OVER EIGHT MILE RIVER
CONTRACT 2016-1013

THIS AGREEMENT is dated as of the day of in the year 2016 by and between the Town of Southington, Connecticut acting by and through the Town Manager, duly authorized therefore, acting herein solely for said Town and without personal liability to the Town, (hereinafter called OWNER) and , (hereinafter called CONTRACTOR).

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

ARTICLE I WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents.

ARTICLE 2 ENGINEER

The ENGINEER who is to act as OWNER'S representative, assume all 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 is the Town of Southington, Engineering Department.

ARTICLE 3 CONTRACT TIMES

The Work will be substantially completed within 244 days after the Notice to Proceed, and completed and ready for final payment within 30 days thereafter.

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 prices stipulated in the CONTRACTOR'S BID attached to this Agreement.

ARTICLE 5 PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Section 1.09 of the State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction Form 817 (2016). Applications for Payment will be processed by ENGINEER as provided in the 817.

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 ENGINEER, on a monthly basis during construction as provided in paragraphs 5.1.1 and 5.2 below. All such payments will be measured by the schedule of values established in the bid documents (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 Progress payments will be made in an amount equal to 98 percent of Work completed (with the balance being retainage) 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 Section 1.09.06 of the 817.

- 5.2 Final Payment. Upon final completion and acceptance of the Work, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER except as provided in paragraph 5.3.
- 5.3 Retainage. The Owner may retain out of the moneys otherwise payable to the Contractor hereunder a percentage of 2 percent and may expend the same, in the manner hereinafter provided, in making such repairs, corrections or replacements in the Work as the Owner, in its sole judgment, may deem necessary.

If at any time within the said period of guarantee (1 year) any part of the Work requires repairing, correction or replacement, the Owner may notify the Contractor in writing to make the required repairs, correction or replacements. If the Contractor neglects to commence making such repairs, correction, or replacements to the satisfaction of the Owner within three (3) days from the date of receipt of such notice, or having commenced fails to prosecute such work with diligence, the Owner may employ other persons to make the same. The Owner shall pay the cost and expense of the same out of the amounts retained for that purpose. Upon the expiration of the said period of guarantee, provided that the work at that time is in good order, the Contractor will be entitled to receive the whole or such part of the sum last aforesaid, if any, as may remain after the cost and expense of making said repairs, correction or replacements, in the manner aforesaid, have been paid therefrom.

ARTICLE 6 CONTRACTOR'S REPRESENTATIONS

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

- 6.1 CONTRACTOR has examined and carefully studied the Contract Documents (including any Addenda) and the other related data identified in the Bidding Documents including "technical data."
- 6.2 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.
- 6.3 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.
- 6.4 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 contract documents. CONTRACTOR accepts the determination set forth in Section 1.02.04 of the 817 of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in Section 1.02.04 of the 817. 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 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.

- 6.5 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.
- 6.6 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.
- 6.7 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution 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 7 CONTRACT DOCUMENTS

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

- 7.1 Invitation to Bid.
- 7.2 Instructions to Bidders.
- 7.3 CONTRACTOR's Bid.
- 7.4 This Agreement.
- 7.5 Performance, Payment, and other bonds.
- 7.6 State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction Form 817.
- 7.7 Plans.
- 7.75 Specifications.
- 7.8 Details and Specification Sheets herein.
- 7.9 Addenda numbers to , inclusive.
- 7.10 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.

ARTICLE 8 MISCELLANEOUS

- 8.1 Terms used in this Agreement which are defined in the 817 will have the meanings indicated in the 817.

- 8.2 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 with release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 8.3 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.
- 8.4 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.
- 8.5 The Contractor shall not discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age, or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.
- 8.6 Title VI requirements necessitate the availability of translators for those with limited English proficiency. All contractors who have contracted with the Town of Southington shall be responsible to maintain this policy during the contractual relationship. The contractor shall also maintain this policy in dealing with its subcontractors and the Town Attorney's Office has the right to review with any contractor the adherence to this policy whether through the master contract or a subcontractor. If any prospective contractor requires any assistance for language purposes, please contact:

| | |
|----------|---------------------------------|
| Spanish: | Ralph/Aida Diaz at 860-276-8875 |
| Polish: | Walter Kizilski at 860-621-2155 |
| Italian: | Tina Riccio at 860-621-9148 |

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 ENGINEER on their behalf.

This Agreement will be effective on _____, 2016 (which is the Effective Date of the Agreement).

OWNER – TOWN OF SOUTHINGTON

Garry Brumback, Town Manager

CONTRACTOR

By _____

(CORPORATE SEAL)

Attest: _____

Address for giving notices:

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

Approved as to Form

Mark Sciota
Deputy Town Manager/Town Attorney

Performance Bond

Any singular reference to Contractor, Surety, Owner of 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

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: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

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

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-A (1996 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.

00610-1

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

2. If the CONTRACTOR performs the Contract, the Surety and the 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, the Surety's obligation under this Bond shall arise after:

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

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and Surety have received notice as provided in paragraph 3.1; and

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

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

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

4.1. Arrange for the CONTRACTOR, with consent of the 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 the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the 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 the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the 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;

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in

whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

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

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

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the 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 the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the 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 the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the 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 the CONTRACTOR ceased working or within two years after the 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 the Surety, the OWNER or the 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 or other legal requirement in the location where the Contract was performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal 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 the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

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

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

00610-2

Payment Bond

Any singular reference to Contractor, Surety, Owner of 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

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: _____ (Corp. Seal)

Signature: _____
Name and Title:

SURETY

Company: _____ (Corp. Seal)

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

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

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____
Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____
Name and Title:

EJCDC No. 1910-28-B (1996 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.

00620-1

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

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

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

2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the 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 the CONTRACTOR and the Surety, and provided there is no OWNER Default.

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

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

4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the 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 the CONTRACTOR:

1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the 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 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 the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the 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 the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.

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

6.1. Send an answer to the Claimant, with a copy to the 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. The 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 the Surety.

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

9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The 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. The 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 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 the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the OWNER or the 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 or other legal requirement in the location where the Contract was performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal 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, the 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 the CONTRACTOR or with a Subcontractor of the 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 the CONTRACTOR and the 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 the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

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

00620-2

TOWN OF SOUTHLINGTON

NEW VENDOR DISCLOSURE STATEMENT

Required within Bid (For Bidders who have not worked with the Town of Southington within the last three years).

(Please provide additional sheets as necessary to answer any of the following questions.)

APPLICANT: _____

ADDRESS: _____

PRINCIPAL OFFICE: _____ PHONE: _____ FAX: _____

1. Please check appropriate organizational structure:

_____ Corporation _____ Other
_____ Partnership _____ Sole Proprietorship

2. If a corporation, answer the following:

a. Date of incorporation _____
b. State of incorporation _____
c. List Board of Directors and Titles: _____

3. If a sole proprietorship or partnership, answer the following:

a. Date of organization: _____
b. Name and address of all partners: _____

c. If partnership (state whether general or limited): _____

4. How many years has your organization been in business? _____

5. How many years has your organization been in business under it's present business name? _____

6. Under what other, or former, names has your organization operated?

7. If other than a corporation, sole proprietorship, or partnership describe organization and name principals:

8. List states and categories in which your organization is legally qualified to do business.

9. List the service/products normally performed/sold by your company:

10. Name(s), address(es) and phone number(s) of municipalities, corporation(s) or any other business entities which the Town of Southington may contact as a business reference:

11. Please list bank references: _____

12. Is your corporation or business currently on the pre-approved bidders list for the State of Connecticut? _____

If yes, please list categories under the State of Connecticut list for which you are pre-approved:

The undersigned swears that the foregoing statements and attachments which includes _____ pages, are true and correct and includes all material information necessary to identify and explain the operations of

(Name of Organization)

as well as the ownership thereof. It is recognized and acknowledged that statements herein are being given under oath and any material misrepresentation will be grounds for terminating any contract and/or prequalifications and for initiating action under Federal or State laws concerning false statements. Further, it may prevent the said firm from participating in future contracts with the Town of Southington.

Signature of Owner, Officer, President,
Chief Executive Officer

Name/Title Date

TOWN OF SOUTHTON
NEW VENDOR FORM

For Finance Department Use

| |
|------------------------------|
| Vendor #: _____ |
| Date set up in system: _____ |

Vendor Name: _____

Business Address:

Street _____
City _____
State/Zip _____
Phone _____
Fax _____

Remit To (if different than *Business Address*)

Street _____
City _____
State/Zip _____

Attached W-9

Vendor Number Requested By: _____

**General Description of
items/services being purchased:** _____

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

| | | |
|---|---|---|
| Print or type See Specific Instructions on page 2. | Name (as shown on your income tax return) | |
| | Business name/disregarded entity name, if different from above | |
| | Check appropriate box for federal tax classification (required): <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate | |
| | <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ | |
| | <input type="checkbox"/> Other (see instructions) ▶ | |
| Address (number, street, and apt. or suite no.) | | Requester's name and address (optional) |
| City, state, and ZIP code | | |
| List account number(s) here (optional) | | |

| | | | | | | | |
|--|---|--------------------------------|--|--|---|--|---|
| Part I | Taxpayer Identification Number (TIN) | | | | | | |
| Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i> on page 3. | | | | | | | |
| Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter. | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">Social security number</td> </tr> <tr> <td style="width: 40px; text-align: center;"> </td> <td style="width: 40px; text-align: center;">- </td> </tr> <tr> <td style="width: 40px; text-align: center;"> </td> <td style="width: 40px; text-align: center;">- </td> </tr> </table> | | Social security number | | | - | | - |
| Social security number | | | | | | | |
| | - | | | | | | |
| | - | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">Employer identification number</td> </tr> <tr> <td style="width: 40px; text-align: center;"> </td> <td style="width: 40px; text-align: center;">- </td> </tr> <tr> <td style="width: 40px; text-align: center;"> </td> <td style="width: 40px; text-align: center;">- </td> </tr> </table> | | Employer identification number | | | - | | - |
| Employer identification number | | | | | | | |
| | - | | | | | | |
| | - | | | | | | |

| | |
|---|----------------------|
| Part II | Certification |
| Under penalties of perjury, I certify that: | |
| 1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and | |
| 2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and | |
| 3. I am a U.S. citizen or other U.S. person (defined below). | |
| Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4. | |

| | | |
|------------------|----------------------------|--------|
| Sign Here | Signature of U.S. person ▶ | Date ▶ |
|------------------|----------------------------|--------|

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

State Of Connecticut
By His Excellency
Thomas J. Meskill
Governor

Executive Order No. Three

WHEREAS, sections 4-61d(b) and 4-114a of the 1969 supplement to the general statutes require nondiscrimination clauses in state contracts and subcontracts for construction on public buildings, other public works and goods and services, and

WHEREAS, section 4-61e(c) of the 1969 supplement to the general statutes requires the labor department to encourage and enforce compliance with this policy by both employers and labor unions, and to promote equal employment opportunities, and

WHEREAS, the government of this state recognizes the duty and desirability of its leadership in providing equal employment opportunity, by implementing these laws,
NOW, THEREFORE, I, THOMAS J. MESKILL, Governor of the State of Connecticut, acting by virtue of the authority vested in me under section twelve of article fourth of the constitution of the state, as supplemented by section 3-1 of the general statutes, do hereby ORDER and DIRECT, as follows, by this Executive Order:

I. The labor commissioner shall be responsible for the administration of this Order and shall adopt such regulations as he deems necessary and appropriate to achieve the purposes of this Order. Upon the promulgation of this Order, the commissioner of finance and control shall issue a directive forthwith to all state agencies, that henceforth all state contracts and subcontracts for construction on public buildings, other public works and goods and services shall contain a provision rendering such contract or subcontract subject to this Order, and that such contract or subcontract may be cancelled, terminated or suspended by the labor commissioner for violation of or noncompliance with this Order or state or federal laws concerning nondiscrimination, notwithstanding that the labor commissioner is not a party to such contract or subcontract.

II. Each contractor having a contract containing the provisions prescribed in section 4-114a of the 1969 supplement to the general statutes, shall file, and shall cause each of his subcontractors to file, compliance reports with the contracting agency or the labor commissioner, as may be directed. Such reports shall be filed within such times and shall contain such information as to employment policies and statistics of the contractor and each subcontractor, and shall be in such form as the labor commissioner may prescribe. Bidders or prospective contractors or subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this Order or any preceding similar Order, and in that event to submit on behalf of themselves and their proposed subcontractors compliance reports prior to or as an initial part of their bid or negotiation of a contract.

III. Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor organization or employment agency as defined in section 31-122 of the general statutes, the compliance report shall identify the said organization or agency and the contracting agency or the labor commissioner may require a compliance report to be filed with the contracting agency or the labor commissioner, as may be directed, by such organization or agency, signed by an authorized officer or agent of such organization or agency, with supporting information, to the effect that the signer's practices and policies, including but not limited to matters concerning personnel, training, apprenticeship, membership, grievance and representation, and upgrading, do not discriminate on grounds of race, color, religious creed, age, sex or national origin, or ancestry of any individual, and that the signer will either affirmatively cooperate in the implementation of the policy and provisions of this Order, or that it consents and agrees that recruitment, employment and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the Order.

IV. The labor commissioner may by regulation exempt certain classes of contracts, subcontracts or purchase orders from the implementation of this Order, for standard commercial supplies or raw materials, for less than specified amounts of money or numbers of workers or for subcontractors below a specified tier. The labor commissioner may also provide by regulation for the exemption of facilities of a contractor which are in all respects separate and distinct from activities of the contractor related to the performance of the state contract, provided only that such exemption will not interfere with or impede the implementation of this Order, and provided further, that in the absence of such an exemption, all facilities shall be covered by the provisions of this Order.

V. Each contracting agency shall be primarily responsible for obtaining compliance with the regulations of the labor commissioner with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the regulations of the labor commissioner in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this Order and of the regulations of the labor commissioner issued pursuant to this Order. They are directed to cooperate with the labor commissioner and to furnish the labor commissioner such information and assistance as he may require in the performance of his functions under this Order. They are further directed to appoint or designate from among the personnel of each agency, compliance officers, whose duty shall be to seek compliance with the objectives of this Order by conference, conciliation, mediation, or persuasion.

VI. The labor commissioner may investigate the employment practices and procedures of any state contractor or subcontractor and the practices and policies of any labor organization or employment agency hereinabove described, relating to employment under the state contract, as concerns nondiscrimination by such organization or agency as hereinabove described, or the labor commissioner may initiate such investigation by the appropriate contract agency, to determine whether or not the contractual provisions hereinabove specified or statutes of the state respecting them have been violated. Such investigation shall be conducted in accordance with the procedures established by the labor commissioner and the investigating agency shall report to the labor commissioner any action taken or recommended.

VII. The labor commissioner shall receive and investigate or cause to be investigated complaints by employees or prospective employees of a state contractor or subcontractor or members or applicants for membership or apprenticeship or training in a labor organization or employment agency hereinabove described, which allege discrimination contrary to the contractual provisions specified hereinabove or state statutes requiring nondiscrimination in employment opportunity. If this investigation is conducted for the labor commissioner by a contracting agency, that agency shall report to the labor commissioner what action has been taken or is recommended with regard to such complaints.

VIII. The labor commissioner shall use his best efforts, directly and through contracting agencies, other interested federal, state and local agencies, contractors and all other available instrumentalities, including the commission on human rights and opportunities, the executive committee on human rights and opportunities, and the apprenticeship council under its mandate to provide advice and counsel to the labor commissioner in providing equal employment opportunities to all apprentices and to provide training, employment and upgrading opportunities for disadvantaged workers, in accordance with section 31-51(d) of the 1969 supplement to the general statutes, to cause any labor organization or any employment agency whose members are engaged in work under government contracts or referring workers or providing supervising apprenticeship or training for or in the course of work under a state contract or subcontract to cooperate in the implementation of the purposes of this Order. The labor commissioner shall in appropriate cases notify the commission on human rights and opportunities or other appropriate state or federal agencies whenever it has reason to believe that the practices of any such organization or agency violate equal employment opportunity requirements of state or federal law.

IX. The labor commissioner or any agency officer or employee in the executive branch designated by regulation of the labor commissioner may hold such hearings, public or private, as the labor commissioner may deem advisable for compliance, enforcement or educational purposes under this Order.

X. (a) The labor commissioner may hold or cause to be held hearings, prior to imposing or ordering or recommending the imposition of penalties and sanctions under this Order. No order for disbarment of any contractor from further state contracts shall be made without affording the contractor an opportunity for a hearing. In accordance with such regulations as the labor commissioner may adopt, the commissioner or the appropriate contracting agency may

1. Publish or cause to be published the names of contractors or labor organizations or employment agencies as hereinabove described which it has concluded have complied or failed to comply with the provisions of this Order or the regulations of the labor commissioner in implementing this Order.

2. Recommend to the commission on human rights and opportunities that in cases in which there is substantial or material violation or threat thereof of the contractual provision or related state statutes concerned herein, appropriate proceedings be brought to enforce them, including proceedings by the commission on its own motion under chapter 563 of the general statutes and the enjoining, within the limitations of applicable law, of organizations, individuals or groups who

prevent directly or indirectly compliance with the provisions of this Order.

3. Recommend that criminal proceedings be brought under chapter 939 of the general statutes.
4. Cancel, terminate, suspend or cause to be cancelled, terminated, or suspended in accordance with law any contract or any portion or portions thereof for failure of the contractor or subcontractor to comply with the nondiscrimination provisions of the contract. Contracts may be cancelled, terminated, suspended absolutely or their continuance conditioned upon a program for future compliance approved by the contracting agency.
5. Provide that any contracting agency shall refrain from entering into any further contracts or extensions or modifications of existing contracts with any contractor until he has satisfied the labor commissioner that he has established and will carry out personnel and employment policies compliant with this Order.
6. Under regulations prescribed by the labor commissioner each contracting agency shall make reasonable efforts with a reasonable period of time to secure compliance with the contract provisions of this Order by methods of conference, conciliation, mediation or persuasion, before other proceedings shall be instituted under this Order or before a state contract shall be cancelled or terminated in whole or in part for failure of the contractor or subcontractor to comply with the contract provisions of state statute and this Order.

(b) Any contracting agency taking any action authorized by this Order, whether on its own motion or as directed by the labor commissioner or pursuant to his regulations shall promptly notify him of such action. Whenever the labor commissioner makes a determination under this Order, he shall promptly notify the appropriate contracting agency and other interested federal, state and local agencies of the action recommended. The state and local agency or agencies shall take such action and shall report the results thereof to the labor commissioner within such time as he shall specify.

XI. If the labor commissioner shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless he has satisfactorily complied with the provisions of this Order, or submits a program for compliance acceptable to the labor commissioner, or if the labor commissioner so authorizes, to the contracting agency.

XII. Whenever a contracting agency cancels or terminates a contract, or a contractor has been disbarred from further government contracts because of noncompliance with the contract provisions with regard to nondiscrimination, the labor commissioner or the contracting agency shall rescind such disbarment, upon the satisfaction of the labor commissioner that the contractor has purged himself of such noncompliance and will thenceforth carry out personnel and employment policies of nondiscrimination in compliance with the provision of this Order.

XIII. The labor commissioner may delegate to any officer; agency or employee in the executive branch any function or duty of the labor commissioner under this Order except authority to promulgate regulations of a general nature.

XIV. This Executive Order supplements the Executive Order issued on September 28, 1967. All regulations, orders, instructions, designations and other directives issued heretofore in these premises, including those issued by the heads of various departments or agencies under or pursuant to prior order or statute, shall remain in full force and effect, unless and until revoked or superceded by appropriate authority, to the extent that they are not inconsistent with this Order.

This Order shall become effective thirty days after the date of this Order.

Dated at Hartford, Connecticut, this 16th day of June, 1971

Thomas J. Meskill
Governor

Filed this 16th day of
June, 1971.

Harry Hammer
Secretary Of The State

State Of Connecticut
By His Excellency
Thomas J. Meskill
Governor

Executive Order No. Seventeen

WHEREAS, Section 31-237 of the General Statutes of Connecticut as amended requires the maintaining of the established free services of the Connecticut State Employment Service to both employers and prospective employees and

WHEREAS, Section 31-5 of the General Statutes of Connecticut requires that no compensation or fee shall be charged or received directly or indirectly for the services of the Connecticut State Employment Service and

WHEREAS, large numbers of our citizens who have served in the Armed Forces of our nation are returning to civilian life in our state and seeking employment in civilian occupations and

WHEREAS, we owe a duty as well as gratitude to these returning veterans including the duty to find suitable employment for them and

WHEREAS, many of our handicapped citizens are fully capable of employment and are entitled to be placed in suitable employment and

WHEREAS, many of the citizens of our state who are unemployed are unaware of the job openings and employment opportunities which do in fact exist in our state and

WHEREAS, notwithstanding the free services of the Connecticut State Employment Service, many of our Connecticut employers do not use its free services or do not avail themselves fully of all the services offered,

NOW, THEREFORE, I, THOMAS J. MESKILL, Governor of the State of Connecticut, acting by virtue of the authority vested in me under the fourth article of the Constitution of the State and in accordance with Section 3-1 of the General Statutes, do hereby ORDER and direct, as follows, by this Executive Order:

I. The Labor Commissioner shall be responsible for the administration of this Order and shall do all acts necessary and appropriate to achieve its purpose. Upon promulgation of this Order, the Commissioner of Finance and Control shall issue a directive forthwith to all state agencies, that henceforth all state contracts and subcontracts for construction on public buildings, other public works and goods and services shall contain a provision rendering such contract or subcontract subject to this Order, and that such contract or subcontract may be cancelled, terminated or suspended by the Labor Commissioner for violation of or noncompliance with this Order, notwithstanding that the Labor Commissioner is not a party to such contract or subcontract.

II. Every contractor and subcontractor having a contract with the state or any of its agencies,

boards, commissions, or departments, every individual partnership, corporation, or business entity having business with the state or who or which seeks to do business with the state, and every bidder or prospective bidder who submits a bid or replies to an invitation to bid on any state contract shall list all employment openings with the office of the Connecticut State Employment Service in the area where the work is to be performed or where the services are to be rendered.

III. All state contracts shall contain a clause which shall be a condition of the contract that the contractor and any subcontractor holding a contract directly under the contractor shall list all employment openings with the Connecticut State Employment Service. The Labor Commissioner may allow exceptions to listings of employment openings which the contractor proposes to fill from within its organization from employees on the rolls of the contractor on the date of publication of the invitation to bid or the date on which the public announcement was published or promulgated advising of the program concerned.

IV. Each contracting agency of the state shall be primarily responsible for obtaining compliance with this Executive Order. Each contracting agency shall appoint or designate from among its personnel one or more persons who shall be responsible for compliance with the objectives of this Order.

V. The Labor Commissioner shall be and is hereby empowered to inspect the books, records, payroll and personnel data of each individual or business entity subject to this Executive Order and may hold hearings or conferences, formal or informal, in pursuance of the duties and responsibilities hereunto delegated to the Labor Commissioner.

VI. The Labor Commissioner or any agency officer or employee in the executive branch designated by regulation of the Labor Commissioner may hold such hearings, public or private, as the Labor Commissioner may deem advisable for compliance, enforcement or educational purposes under this Order.

VII. (a) The Labor Commissioner may hold or cause to be held hearings, prior to imposing, ordering, or recommending the imposition of penalties and sanctions under this Order. In accordance herewith, the Commissioner or the appropriate contracting agency may suspend, cancel, terminate, or cause to be suspended, cancelled, or terminated in accordance with law any contract or portion or portions thereof for failure of the contractor or subcontractor to comply with the listing provisions of the contract. Contracts may be cancelled, terminated, suspended absolutely or their continuance conditioned upon a program for future compliance approved by the contracting agency.

(b) Any contracting agency taking any action authorized by this Order, whether on its own motion or as directed by the Labor Commissioner, shall promptly notify him of such action. Whenever the Labor Commissioner makes a determination under this Order, he shall promptly notify the appropriate contracting agency of the action recommended. The agency shall report the results to the Labor Commissioner promptly.

VIII. If the Labor Commissioner shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless he has satisfactorily complied with the provisions of this Order.

This Order shall become effective sixty days after the date of this Order. Dated at Hartford, Connecticut, this 15th day of February 1973. *Thomas J. Meskill*, Governor
Southington, CT 2016-1013
West Center St.

NOTICE TO CONTRACTOR INTERPRETATION OF FORM 817

The State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction Form 817 (Form 817) is hereby included in the contract documents and is used as a reference for this project.

SECTION 1.01 – DEFINITION OF TERMS AND PERMISSIBLE ABBREVIATIONS

Under the following Article replace the definitions with the following:

Article 1.01.01 – Definitions:

COMMISSIONER: Shall mean the Town of Southington, Town Manager or his/her agents.

DEPARTMENT: Shall mean the Town of Southington.

ENGINEER: Shall mean the Town of Southington Town Engineer or his agents.

STATE: Shall mean the Town of Southington.

TRANSPORTATION MANAGER OF CONTRACTS: Shall mean the Town of Southington Public Works Director or his agents.

DEPARTMENT'S ASSISTANT DISTRICT ENGINEER: Shall mean the Town of Southington Public Works Director or his agents.

OWNER: Shall mean the Town of Southington.

CTDOT DISTRICT: Shall mean the Town of Southington

NOTICE TO CONTRACTOR
GENERAL CONDITIONS OF BIDDING
EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS & SITE OF WORK

The bidder is required to examine carefully the site of work and the Contract documents including proposal form, plans, special provisions, specifications, supplemental specifications, Contract forms and other Contract documents for the work contemplated, and shall request in writing prior to the bid any clarifications that it deems necessary to prepare its bid. It will be assumed that the bidder has judged for and satisfied itself as to the conditions to be encountered at the site, as to the completeness and requirements of the contract plans and specifications, as to the character, quality and quantities of the work to be performed and materials to be furnished for said work, and as to the requirements of the above contract documents, and in particular, but not limited to, what is required under each Contract item, or under the general cost of the work, or under another or more general Contract item in the absence of particular items. Therefore, while clarifications regarding the Contract documents should be expected from time to time during prosecution of the work and unless these clarifications substantially change the scope of the work, in submitting its bid the bidder shall relinquish any claim to additional compensation or time based upon these clarifications of the Contract documents or a misunderstanding or lack of knowledge of the site conditions, the work required or the method of work required.

The subsurface information furnished is based on interpretation of investigations made only at the specific locations indicated, and no assurance is given that these conditions are necessarily typical of other locations or that they have remained unchanged since the field data were obtained. No assurance is given that the presence or absence of water in subsurface explorations at the time of these explorations will be representative of actual conditions at the time of construction. The contractor shall be solely responsible for all assumptions, deductions, or conclusions it may make or derive from its examination of any subsurface information or document provided. The furnishing or making available such information does not provide or make any warranty or representation as to the actual conditions that may be encountered or actual quantities or distribution of quantities of work which will be required.

ESTIMATED QUANTITIES

The quantities shown on the proposal form or in the contract documents are approximate only and are given as a basis of evaluation for award of the contract. Provision of these quantities provides no implied guarantee that these quantities shall remain unchanged in the actual construction, and the contractor shall not plead misunderstanding or deception because of any variation (large or small) between estimated and final quantities. The Town reserves the right to increase or decrease any or all of the quantities, or completely delete contract items, as shown on the proposal form or in the contract documents as it deems necessary to complete the contract project.

BIDDER'S OBLIGATIONS REGARDING DISCOVERY OF AN ERROR IN THE CONTRACT DOCUMENTS

Any bidder that discovers an error in the bid proposal or contract documents, including but not limited to the plans, must report that error in writing prior to the bid and within two (2) business days of discovering the error. A failure to do so may result in finding the contractor to be non-responsible as the low bidder.

NOTICE TO CONTRACTOR

SECTION 1.08 – PROSECUTION & PROGRESS

Sections 1.08.03, 1.08.04 & 1.08.07: These sections are supplemented as follows:

Article 1.08.03 – Prosecution of Work:

Add the following:

Upon award, the Contractor shall proceed with shop drawings, working drawings, procurement of materials, and all other submittals required to complete the work in accordance with the contract documents.

Payment for materials procured shall be in accordance with Article 1.09.06-Partial Payments.

The Contractor will not be allowed to implement traffic signal controlled lane closure for Stage Construction until April 1, 2017.

Article 1.08.04 - Limitation of Operations:

Add the following:

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

On the following State observed Legal Holidays:

New Year's Day
Martin Luther King Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

Also, Monday through Saturday between 6:00 p.m. and 7:00 a.m.

No work shall be permitted on Sunday.

Weekend Work:

The Contractor will be allowed to perform work between 7:00 a.m. and 6:00 p.m. on Saturday.

Article 1.08.04 - Limitation of Operations: (continued)

West Center Street:

All construction activities, including the loading and unloading of materials and equipment, shall be limited to Monday through Saturday between 7:00 a.m. to 6:00 p.m.

Access to local property and businesses must be maintained at all times unless prior arrangements are made with property owners or business proprietors.

Maintain existing traffic operations* on:

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

Saturday between 10:00 a.m. and 6:00 p.m.

Sunday all hours.

* During stage construction, existing traffic operations will be considered to be as shown on the Maintenance and Protection of Traffic plans contained in the contract plans.

The Contractor will be allowed to halt West Center Street for a period of time not to exceed ten minutes to perform work as approved by the Engineer on:

Monday through Friday between 9:00 a.m. and 3:00 p.m.

Saturday between 10:00 a.m. and 6:00 p.m.

Article 1.08.07 – Determination of Contract Time:

Add the following:

NOTICE TO CONTRACTOR

SECTION 1.10 – ENVIRONMENTAL COMPLIANCE

Rev. Date 11-12-2014

SECTION 1.10 ENVIRONMENTAL COMPLIANCE

In Article 1.10.03 of BEST MANAGEMENT PRACTICES

Add the following after Best Management Practice Number 14:

15. The Contractor is hereby notified that the State listed species of Special Concern Eastern box turtle (*Terrapene carolina*), Spotted Turtle (*Clemmys guttata*), and the Wood Turtle (*Glyptemys insculpta*) are all present within the Project limits.

Habitat destruction, degradation or alteration and fragmentation all threaten Wood Turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. Disturbances to stream and riparian habitats and activities that change the hydrology of the stream, the physical habitat itself and water quality are all potentially detrimental activities for the Wood Turtle. Although Wood Turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover. The greatest concerns during projects occurring in wood turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter wood turtle habitat would be beneficial in minimizing direct mortality of adults.

Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Spotted Turtles are semi-aquatic in nature, which means they live both on terrestrial land and water. This species lives in several types of habitats including bogs, swamps, fens, woodland streams, wet pastures and marshes. They sometimes also inhabit brackish streams influenced by tides. These reptiles always live in areas with slow moving water and soft soil. Spotted turtles are active hunters and they mainly hunt underwater they sometimes move onto terrestrial lands for hunting. Habitat destruction, degradation or alteration and fragmentation all threaten spotted turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. The greatest concerns during projects occurring in spotted turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter spotted turtle habitat would be beneficial in minimizing direct mortality of adults.

GENERAL

All work activity during the time between April 1 and September 30, the Contractor will be required to take precautionary measures to protect the habitat of Special Concern Species listed. All construction activities taking place within the turtles' active period will need to be coordinated with the Town of Southington Conservation Commission Inland Wetland & Watercourse Agency.

The Contractor shall through the Engineer at least 10 days prior to the commencement of any construction activities, arrange for a Town of Southington Conservation Commission Inland Wetland & Watercourse Agency or their authorized delegate to be available to meet and discuss proper protocol for maintaining environmental commitments made to the protection of these species and habitat. The Contractor will ensure that the following protocols are followed and maintained during the course of the Project:

- Silt fencing should be installed around the work area prior to construction, please avoid erosion control products that are embedded with plastic netting as these can be fatal to wildlife;
- Where possible, AVOID installing sediment and erosion control materials from late August through September and from March through mid-May. These two time periods are when amphibians and reptiles are most active, moving to and from wetlands to breed;
- After silt fencing is installed and prior to construction, a sweep of the work area should be conducted to look for turtles;
- Workers should be apprised of the possible presence of turtles, and provided a description of the species.
http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655;
- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;
- No vehicles or heavy machinery should be parked in any turtle habitat;
- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and
- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.
- Stockpiles of soil should be cordoned off with silt fencing so turtles do not attempt to try and nest in them.

GENERAL

These species are protected by state laws which prohibit killing, harming, taking, or keeping them in your possession. Workers shall be notified of the existence of all Special Concern turtles in this area and be apprised of the laws protecting them. Photographs and the laws protecting Eastern box turtles are available @ http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655, and shall be posted in the Contractor's and Inspector's field offices. Any observations of these species are to be immediately reported to the Town of Southington Conservation Commission Inland Wetland & Watercourse Agency.

GENERAL



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

April 18, 2016

Mr. Joseph Scalise
AECOM, Inc.
500 Enterprise Drive, Suite 1A
Rocky Hill, CT 06067
joseph.scalise@accom.com

Project: Project 9131-5535 Bridge Rehabilitation of West Center Street Extension over the Eightmile River in Southington, Connecticut
NDDDB Determination No.: 201603346

Dear Joseph,

I have re-reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed Project 9131-5535 Bridge Rehabilitation of West Center Street Extension over the Eightmile River in Southington, Connecticut. According to our records we have known extant populations of State Special Concern *Clemmys guttata* (spotted turtle), *Terrapene carolina carolina* (box turtle) and *Glyptemys insculpta* (wood turtle) in the vicinity of the project site. I have included recommended protection strategies and best management practices for these three state special concern turtles.

Wood Turtle: Habitat destruction, degradation or alteration and fragmentation all threaten Wood Turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. Disturbances to stream and riparian habitats and activities that change the hydrology of the stream, the physical habitat itself and water quality are all potentially detrimental activities for the Wood Turtle. Although Wood Turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover. The greatest concern during projects occurring in wood turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter wood turtle habitat would be beneficial in minimizing direct mortality of adults.

Eastern Box Turtle: Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Spotted Turtle:

79 Elm Street, Hartford, CT 06106-5127
www.ct.gov/deep
Affirmative Action/Equal Opportunity Employer

Spotted Turtles are semi-aquatic in nature, which means they live both on terrestrial land and water. This species lives in several types of habitats including bogs, swamps, fens, woodland streams, wet pastures and marshes. They sometimes also inhabit brackish streams influenced by tides. These reptiles always live in areas with slow moving water and soft soil. Spotted turtles are active hunters and they mainly hunt underwater they sometimes move onto terrestrial lands for hunting. Habitat destruction, degradation or alteration and fragmentation all threaten spotted turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. The greatest concern during projects occurring in spotted turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter spotted turtle habitat would be beneficial in minimizing direct mortality of adults.

Recommended Protection Strategies for Turtles:

If any work will occur when these turtles are active (April 1st to September 30th) I recommend the additional following protection strategies in order to protect these turtles:

- Silt fencing should be installed around the work area prior to construction, please avoid erosion control products that are embedded with plastic netting as these can be fatal to wildlife;
- Where possible, AVOID installing sediment and erosion control materials from late August through September and from March through mid-May. These two time periods are when amphibians and reptiles are most active, moving to and from wetlands to breed;
- After silt fencing is installed and prior to construction, a sweep of the work area should be conducted to look for turtles;
- Workers should be apprised of the possible presence of turtles, and provided a description of the species
(http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);
- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;
- No vehicles or heavy machinery should be parked in any turtle habitat;
- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and
- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.
- Stockpiles of soil should be cordoned off with silt fencing so turtles do not attempt to try and nest in them.

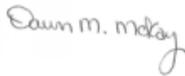
- Use native plantings if possible. Any plantings should be composed of species native to northeastern United States and appropriate for use in riparian habitat.

If these protection strategies are followed then the proposed activities will lessen the impact on the wood turtle and eastern box turtle. I have attached fact sheets on these turtles. This determination is good for one year. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by March 14, 2017.

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

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov. Thank you for consulting the Natural Diversity Data Base. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site.

Sincerely,



Dawn M. McKay
Environmental Analyst 3

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Wood Turtle

Glyptemys insculpta

Background

Wood turtles may be found throughout Connecticut, but they have become increasingly rare due to their complex habitat needs. Wood turtles also have become more scarce in Fairfield County due to the fragmentation of suitable habitat by urban development.

Range

Wood turtles can be found across the northeastern United States into parts of Canada. They range from Nova Scotia through New England, south into northern Virginia, and west through the Great Lakes region into Minnesota.

Description

The scientific name of the wood turtle, *Glyptemys insculpta*, refers to the deeply sculptured or chiseled pattern found on the carapace (top shell). This part of the shell is dark brown or black and may have an array of faint yellow lines radiating from the center of each chiseled, pyramid-like segment due to tannins and minerals accumulating between ridges. These segments of the carapace, as well as those of the plastron (bottom shell), are called scutes. The carapace also is keeled, with a noticeable ridge running from front to back. The plastron is yellow with large dark blotches in the outer corners of each scute. The black or dark brown head and upper limbs are contrasted by brighter pigments ranging from red and orange to a pale yellow on the throat and limb undersides. Orange hues are most typical for New England's wood turtles. The hind feet are only slightly webbed, and the tail is long and thick at the base. Adults weigh approximately 1.5 to 2.5 pounds and reach a length of 5 to 9 inches.



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Habitat and Diet

Wood turtles use aquatic and terrestrial habitats at different times of the year. Their habitats include rivers and large streams, riparian forests (adjacent to rivers), wetlands, hayfields, and other early successional habitats. Terrestrial habitat that is usually within 1,000 feet of a suitable stream or river is most likely used. Preferred stream conditions include moderate flow, sandy or gravelly bottoms, and muddy banks.

Wood turtles are omnivorous and opportunistic. They are not picky eaters and will readily consume slugs, worms, tadpoles, insects, algae, wild fruits, leaves, grass, moss, and carrion.

Life History

From late spring to early fall, wood turtles can be found roaming their aquatic or terrestrial habitats. However, once temperatures drop in autumn, the turtles retreat to rivers and large streams for hibernation. The winter

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION • WILDLIFE DIVISION

is spent underwater, often tucked away below undercut riverbanks within exposed tree roots. Dissolved oxygen is extracted from the water, allowing the turtle to remain submerged entirely until the arrival of spring. Once warmer weather sets in, the turtles will become increasingly more active, eventually leaving the water to begin foraging for food and searching for mates. Travel up or down stream is most likely, as turtles seldom stray very far from their riparian habitats.

Females nest in spring to early summer, depositing anywhere from 4 to 12 eggs into a nest dug out of soft soil, typically in sandy deposits along stream banks or other areas of loose soil. The eggs hatch in late summer or fall and the young turtles may either emerge or remain in the nest for winter hibernation. As soon as the young turtles hatch, they are on their own and receive no care from the adults.

Turtle eggs and hatchlings are heavily preyed upon by a wide variety of predators, ranging from raccoons to birds and snakes. High rates of nest predation and hatchling mortality, paired with the lengthy amount of time it takes for wood turtles to reach sexual maturity, present a challenge to maintaining sustainable populations. Wood turtles live upwards of 40 to 60 years, possibly more.

Conservation Concerns

Loss and fragmentation of habitat are the greatest threats to wood turtles. Many remaining populations in Connecticut are low in numbers and isolated from one another by human-dominated landscapes. Turtles forced to venture farther and farther from appropriate habitat

to find mates and nesting sites are more likely to be run over by cars, attacked by predators, or collected by people as pets.

Other sources of mortality include entanglements in litter and debris left behind by people, as well as strikes from mowing equipment used to maintain hayfields and other early successional habitats.

The wood turtle is imperiled throughout a large portion of its range and was placed under international trade regulatory protection through the Convention on International Trade in Endangered Species (CITES) in 1992. Wood turtles also have been included on the International Union for Conservation of Nature's (IUCN) Red List as a vulnerable species since 1996. They are listed as a species of special concern in Connecticut and protected by the Connecticut Endangered Species Act.

How You Can Help

- *Conserve riparian habitat. Maintaining a buffer strip of natural vegetation (minimum of 100 feet) along the banks of streams and rivers will protect wood turtle habitat and also help improve the water quality of the stream system. Stream banks that are manicured (cleared of natural shrubby and herbaceous vegetation) or armored by rip rap or stone walls will not be used by wood turtles or most other wildlife species.*
- *Do not litter. Wood turtles and other wildlife may accidentally ingest or become entangled in garbage and die.*
- *Leave turtles in the wild. They should never be kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed reduces the ability of the population to maintain itself.*
- *Never release a captive turtle into the wild. It probably would not survive, may not be native to the area, and could introduce diseases to wild populations.*
- *As you drive, watch out for turtles crossing the road. Turtles found crossing roads in June and July are often pregnant females. They should **not** be collected but can be helped on their way. Without creating a traffic hazard or compromising safety, drivers are encouraged to avoid running over turtles that are crossing roads. Also, still keeping safety precautions in mind, you may elect to pick up turtles from the road and move them onto the side in the direction they are headed. Never relocate a turtle to another area that is far from where you found it.*
- *Learn more about turtles and their conservation concerns, and educate others.*
- *If you see a wood turtle, leave it in the wild, take a photograph, record the location where it was seen, and contact the Connecticut Department of Environmental Protection (DEP) Wildlife Division at dep.wildlife@ct.gov, or call 860-424-3011 to report your observation.*



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

4/2011

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Eastern Box Turtle

Terrapene carolina carolina

Description

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

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

Range

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

Habitat and Diet

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



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

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

Life History

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

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

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

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

Conservation Concerns

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

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

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

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

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

How You Can Help

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



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



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

5/2008



Spotted Turtle



Scientific Name: *Clemmys gutata*
Size: 3 – 5 inches (8-12 cm) in length
CT NDDDB Status: Species of Special Concern

Habitat Type: Spotted Turtles are semi-aquatic in nature, which means they live both on terrestrial land and water. This species lives in several types of habitats including bogs, swamps, fens, woodland streams, wet pastures and marshes. They sometimes also inhabit brackish streams influenced by tides. These reptiles always live in areas with slow moving water and soft soil.

Colorations:

- Their carapace is black in color and is spotted with bright yellow marks
- Their plastron, bottom shells, are yellow to orange-yellow in color with a black spot on each scute
- They have smooth upper shells or carapaces. The upper shells are not marked with a central ridge or “keel”. There is one yellow spot on each section of the hatchling’s carapace

Characteristics:

- Small semi-aquatic species.
- Each adult spotted turtle can have up to 100 spots
- The lifespan of this species ranges between 25 to 50 years
- The Turtles of this species are active hunters and they mainly hunt underwater. But, some researches show that they sometimes move onto terrestrial lands for hunting
- Spotted Turtles hibernate on land or in water during the extremely hot and cold months

The contractor is referred to the following:

Notice to Contractor - Utility Coordination

- 0219011A - Sedimentation Control System at Catch Basin**
- 0406275A - Fine Milling of Bituminous Concrete (0 to 4 inches)**
- 0503001A - Removal of Superstructure**
- 0520036A - Asphaltic Plug Expansion Joint System**
- 0521021A - Steel-Laminated Elastomeric Bearings**
- 0602936A - Drilling and Grouting Reinforcing Bars**
- 0603591A - Structural Steel - Miscellaneous**
- 0707009A - Membrane Waterproofing (Cold Liquid Elastomeric)**
- 0822005A - Temporary Precast Concrete Barrier Curb (Structure)**
- 0904487A - Metal Bridge Rail - (Handrail)**
- 0969060A - Construction Field Office, Small**
- 0970006A - Trafficperson (Municipal Police Officer)**
- 0970007A - Trafficperson (Uniformed Flagger)**
- 0971001A - Maintenance and Protection of Traffic**
- 0974001A - Removal of Existing Masonry**
- 1118051A - Temporary Signalization (Site No. 1)**
- 1301765A - Furnishing and Installing 12" Water Main**
- 1301768A - Furnishing and Installing 12" Water Main on Bridge**

NOTICE TO CONTRACTOR – UTILITY COORDINATION

The Contractor is hereby notified that the following utility coordination is required:

Eversource Energy:

Coordination with Eversource Energy is required for temporary electrical service.

The Contractor shall contact:

Bill Clingan
Eversource Energy
203-271-4857

Eversource Gas:

Coordination with Eversource Gas is required to shut off, remove existing gas main, and facilitate installation of new gas main.

Installation, testing and reestablishment of gas service to be performed by Eversource Gas.

The Contractor shall contact:

Bret Factora, Manager, Engineering
Eversource Gas
Phone: 203-596-3071
Email: bret.factora@eversource.com

Southington Water Department:

Coordination with Southington Water Department is required to shut off, remove existing water main and install new water main. Coordinate with Southington Water Department to test new water main and reestablish service.

Testing shall be performed by the Contractor per the project special provisions under the supervision of the Southington Water Department.

The Contractor shall contact:

Albert Fiorillo, Engineering Technician
Southington Water Department
Phone: 860-629-5593

ITEM #0219011A – SEDIMENT CONTROL SYSTEM AT CATCH BASIN

Description: This work shall consist of furnishing, installing, cleaning, maintaining, replacing, and removing sedimentation control at catch basins at the locations and as shown on plans and as directed by the engineer.

Materials

Sack shall be manufactured from a specially designed woven polypropylene geotextile sewn by a double needle machine, using a high strength nylon thread. Sack shall be manufactured by one of the following or an approved equal:

Siltsack®

SI Geosolutions:
www.sigeosolutions.com
(800)621-0444

Dandy Sack™

Dandy Products Inc.
P.O. Box 1980
Westerville, Ohio 43086
Phone: 800-591-2284
Fax: 740-881-2791
Email: dlc@dandyproducts.com
Website: www.dandyproducts.com

FLeXstorm Inlet Filters

Inlet & Pipe Protection
24137 W. 111th St - Unit A
Naperville, IL 60564
Telephone: (866) 287-8655
Fax: (630) 355-3477

The sack will be manufactured to fit the opening of the catch basin or drop inlet. Sack will have the following features: two dump straps attached at the bottom to facilitate the emptying of sack and lifting loops as an integral part of the system to be used to lift sack from the basin. The sack shall have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls, this cord is also a visual means of indicating when the sack should be emptied. Once the strap is covered with sediment, the sack should be emptied, cleaned and placed back into the basin.

Construction Methods:

Installation, removal, and maintenance shall be per manufacturer instructions and recommendations.

Method of Measurement: Sediment Control System at Catch Basin will be measured as each installed, maintained, accepted, and removed. There will be no separate measurement for maintenance or replacement associated with this item.

Basis of Payment:

Sediment Control System at Catch Basin will be paid for at the contract unit price each complete in place and accepted, which price shall include all maintenance throughout construction, materials, equipment, tools, and labor incidental thereto.

Pay Item

Sediment Control System at Catch Basin

Pay Unit

Each

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 at an approved disposal facility unless otherwise stated in the Contract.

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. 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 ¼ inch. The variation of the top of any ridge to the bottom of the groove adjacent to that ridge shall not exceed ¼ 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 +/- ½ 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, 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; 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 #0503001A - REMOVAL OF SUPERSTRUCTURE

Work under this item shall conform to the requirements of Section 5.03 of the Standard Specifications, Form 817, amended as follows:

5.03.01 - Description: *Add the following:*

This work shall consist of the removal and satisfactory disposal of the existing superstructure of Bridge No. 05535 as shown on the plans. The superstructure includes the steel rolled beams, reinforced concrete deck, reinforced concrete parapets, reinforced concrete and granite safety walks, and metal bridge railings.

5.03.03 - Construction Methods: *Add the following:*

All work shall proceed as directed by and to the satisfaction of the Engineer and in accordance with the details shown on the plans, or as approved by the Engineer.

The superstructure shall be dismantled in accordance with the methods proposed by the Contractor and approved by the Engineer. The Contractor's attention is drawn to the environmental sensitivity of the river and surrounding wetlands. This area is designated as a no-drop zone. The Contractor shall provide shielding during demolition to prevent debris, tools, and/or other materials from entering or dropping into the river. Any demolition of material that accidentally falls into the river shall be promptly retrieved, removed from the waterway and properly disposed of by the Contractor.

The demolition shall not result in damage to any permanent construction (new or existing) or to adjoining property or river area. If damage does occur, it shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Town.

Prior to initiating work, the Contractor shall submit for approval, plans and written documentation describing his falsework, methods of removal and shielding required for the protection of traffic, utilities, environmentally sensitive areas and adjoining properties. Approval of the Contractor's plans shall not be considered as relieving the Contractor of any of his responsibility. Working drawings and design computations showing the Contractor's means and method for temporary shielding shall be submitted to the Engineer in accordance with Section 1.05.02(2).

5.03.05 – Basis of Payment: *Replace the first paragraph with the following:*

This work shall be paid for at the contract lump sum price for "Removal of Superstructure", which price shall include all materials, equipment, tools, labor, and all work incidental to the removal of the superstructure including furnishing, erecting and removing any and all temporary shielding required during demolition. It shall also include the satisfactory removal and disposal of all waste materials from the demolition.

ITEM #0520036A - ASPHALTIC PLUG EXPANSION JOINT SYSTEM

Description: Work under this item shall consist of furnishing and installing an asphaltic plug expansion joint system (APJ) in conformance with ASTM D6297, as shown on the plans, and as specified herein.

Work under this item shall also consist of the removal and disposal of bituminous concrete, membrane waterproofing, existing joint components and sealing elements, cleaning and sealing median barrier joints, parapet joints, and sidewalk joints.

Work under this item excludes the removal of Portland cement concrete headers.

Materials: The APJ component materials shall conform to ASTM D6297 and the following:

Aggregate: The aggregate shall meet the following requirements:

- a) Loss on abrasion: The material shall show a loss on abrasion of not more than 25% using AASHTO Method T96.
- b) Soundness: The material shall not have a loss of more than 10% at the end of five cycles when tested with a magnesium sulfate solution for soundness using AASHTO Method T 104.
- c) Gradation: The aggregate shall meet the requirements of Table A below:
- d) Dust: aggregate shall not exceed 0.5% of dust passing the #200 sieve when tested in accordance with AASHTO T-11.

Table A

| <u>Square Mesh Sieves</u> | 1" (25.0 mm) | 3/4" (19.0 mm) | 1/2" (12.5 mm) | 3/8" (9.5 mm) | No. 4 (4.75 mm) |
|----------------------------------|-------------------------|---------------------------|---------------------------|--------------------------|----------------------------|
| % passing | 100 | 90 - 100 | 20 - 55 | 0 - 15 | 0 - 5 |

A sample of the aggregate shall be submitted to the Department with a Certified Test Report in accordance with Article 1.06.07 for each 20 tons of loose material or its equivalent number of bags delivered to the job site. The Certified Test report must include a gradation analysis resulting from a physical test performed on the actual material that accompanies the report.

Anti-Tacking Material: This material shall be a fine graded granular material with 100% passing the $3/16$ " sieve and no more than 5% passing the #200 when tested in accordance with AASHTO T-27.

Backer Rod: All backer rods shall satisfy the requirements of ASTM D5249, Type 1.

Bridging Plate: The bridging plates shall be steel conforming to the requirements of ASTM A36 and be a minimum $1/4$ " thick and 8" wide. For joint openings in excess of 3" the minimum plate dimensions shall be $3/8$ " thick by 12" wide. Individual sections of plate shall

not exceed 4' in length. Steel locating pins for securing the plates shall be size 16d minimum, hot-dip galvanized, and spaced no more than 12" apart.

Concrete Leveling Material: Shall be a cementitious-based material that conforms to ASTM C928 Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repair, for R3 performance requirements in Table 1 and achieve the following:

- a. Final set in 45 Minutes
- b. 2500 psi compressive strength in 24 hours
- c. 5000 psi compressive strength in 7 days

Parapet Sealant: The sealant used in parapet joint openings shall be a single component non-sag silicone sealant that conforms to the requirements of ASTM D5893.

Sidewalk Sealant: The sealant used in sidewalk joint openings shall be a rapid cure, self-leveling, cold applied, two-component silicone sealant. The silicone sealant shall conform to the requirements listed in Table B:

Table B

| Properties - As Supplied | Test Method | Requirement |
|---|-----------------------------|--------------------|
| Extrusion Rate | ASTM C1183 | 200-600 grams/min |
| Leveling | ASTM C639 | Self-Leveling |
| Specific Gravity | ASTM D792 | 1.20 to 1.40 |
| Properties - Mixed | Test Method | Requirement |
| Tack Free Time | ASTM C679 | 60 min. max. |
| Joint Elongation – Adhesion to concrete | ASTM D5329 ^{1,2,3} | 600% min |
| Joint Modulus @ 100% elongation | ASTM D5329 ^{1,2,3} | 15 psi max |
| Cure Evaluation | ASTM D5893 | Pass @ 5 hours |

1. Specimens cured at 77 ± 3^0 F and $50 \pm 5\%$ relative humidity for 7 days
2. Specimens size: 1/2" wide by 1/2" thick by 2" long
3. Tensile Adhesion test only

The date of manufacture shall be provided with each lot. No sealant shall be used beyond its maximum shelf-life date.

The two-part silicone sealants shown in Table C are known to have met the specified requirements:

Table C

| Product | Supplier |
|--------------------|---|
| Dow Corning 902RCS | Dow Corning Corporation 2200 W Salzburg Road Auburn, Michigan 48611 |
| Wabo SiliconeSeal | BASF/Watson Bowman Acme Corporation 95 Pineview Drive Amherst, New York 14228 |

Other two-component silicone joint sealants expressly manufactured for use with concrete that conform to the aforementioned ASTM requirements will be considered for use provided they are submitted in advance for approval to the Engineer. Other joint sealants will be considered for use only if a complete product description is submitted, as well as documentation describing at least five installations of the product. These documented installations must demonstrate that the product has performed successfully for at least three years on similar bridge expansion joint applications.

A Materials Certificate and Certified Test Report for the asphaltic binder shall be submitted by the Contractor in accordance with the requirements of Article 1.06.07 certifying that the asphaltic binder satisfies the requirements of the most current version of ASTM D6297.

A Materials Certificate for all other components of the APJ, leveling material, backer rod and sealant used in sealing parapet and sidewalk joint openings, shall be submitted by the Contractor in accordance with the requirements of Article 1.06.07

Construction Methods: The APJ shall be installed at the locations shown on the plans and in stages in accordance with the traffic requirements in the special provisions “Maintenance and Protection of Traffic” and “Prosecution and Progress”.

At least 30 days prior to start of the work, the Contractor shall submit to the Engineer for approval a detailed Quality Control Plan for the installation of the APJ. The submittal shall include:

- a) A list of all manufactured materials and their properties to be incorporated in the joint system, including, but not limited to the asphaltic binder, anti-tack material, backer rod, sealant, leveling material, as well as the aggregate’s source.
- b) A detailed step by step installation procedure and a list of the specific equipment to be used for the installation. The Quality Control Plan must fully comply with the specifications and address all anticipated field conditions, including periods of inclement weather.

The APJ shall not be installed when bituminous concrete overlay or joint cutout is wet. The APJ shall only be installed when the bridge superstructure surface temperature is within the limits specified in Table D and when the ambient air temperature is within the range of 45⁰F to 95⁰F.

The bridge superstructure surface temperature range is determined using the thermal movement range provided on the contract plans for the proposed APJ deck installation location and the selected APJ product.

Table D

| Installation Restrictions | |
|---|--|
| Designed Deck Joint Thermal Movement Range² | Bridge Superstructure Surface Temperature¹ |
| 0" to 1" | 45° F to 95° F |
| 1-1/8" | 45° F to 90° F |
| 1-1/4" | 45° F to 80° F |
| 1-3/8" | 45° F to 70° F |
| 1-1/2" | 45° F to 65° F |

- The superstructure surface temperature shall be determined from the average of three or more surface temperature readings taken at different locations on the interior girder surfaces by the Contractor as directed by the Engineer. Temperature measurements of the superstructure shall be taken by the contractor with a calibrated hand held digital infrared laser-sighted thermometer on the surfaces of an interior steel girder, or interior concrete girder protected from direct sunlight. The infrared thermometer to be supplied by the Contractor for this purpose shall meet certification requirements of EN61326-1, EN61010-1, and EN60825-1 maintained by the European Committee for Electrotechnical Standardization (CENELEC). The thermometer shall have a minimum distance-to-spot ratio of 50:1 and shall have adjustable emissivity control. The thermometer shall have a minimum accuracy value of $\pm 1\%$ of reading or $\pm 2^{\circ}\text{F}$, whichever is greater. The thermometer shall be used in strict accordance with the manufacturer's written directions. An additional infrared thermometer satisfying the same standards to be used in this application shall also be provided to the Engineer for quality assurance purposes.*
- Linear interpolation may be used to determine an allowable surface temperature range for thermal movement ranges in between values shown in the table, as approved by the Engineer.*

Prior to installing the APJ, the Contractor shall determine the exact location of the deck joint beneath the bituminous concrete overly.

The APJ shall be installed symmetrically about the deck joint opening to the dimensions shown on the plans or as directed by the Engineer; not to exceed 24 inches measured perpendicular to the deck joint. The proposed saw cut lines shall be marked on the bituminous concrete overlay by the Contractor and approved by the Engineer, prior to saw-cutting. The saw-cuts delineating the edges of the APJ shall extend full depth of the bituminous concrete overlay.

The existing bituminous concrete overlay, waterproofing membrane and/or existing expansion joint material, within the saw cut limits shall be removed and disposed of by the Contractor to create the joint cutout.

Concrete surfaces that will support the bridging plates shall be smooth and form a plane along and across the deck joint. Rough or damaged concrete surfaces shall be repaired with a leveling compound meeting the requirements of this specification. Deteriorated concrete areas within the joint limits shall be repaired as directed by the Engineer: such repairs, when deemed necessary by the Engineer, shall be compensated for under the applicable concrete deck repair items in the Contract. The existing and repaired concrete surfaces shall provide continuous uniform support for the bridging plate and prevent the plate from rocking and deflecting.

Prior to the installation of the backer rod, all horizontal and vertical surfaces of the joint cutout shall be abrasive blast cleaned using an oil-free, compressed air supply. The entire cutout shall then be cleared of all loose blast media, dust, debris and moisture using an oil-free, hot air lance capable of producing an air stream at 3,000°F with a velocity of 3,000 feet per second.

A single backer rod, with a diameter at least 25% greater than the existing joint opening at the time of installation, shall be installed at an inch below the bridging plate in the existing deck joint opening between the concrete edges.

Asphaltic binder shall be heated to a temperature within the manufacturer's recommended application temperature range which shall be provided in the Quality Control Plan. During application, the temperature of the binder shall be maintained within this range. In no case shall the temperature of the binder go below 350° F nor exceed the manufacturer's recommended maximum heating temperature.

Asphaltic binder shall then be poured into the joint opening until it completely fills the gap above the backer rod. A thin layer of binder shall next be applied to the all horizontal and vertical surfaces of the joint cutout.

Bridging plates shall be abrasive blast-cleaned on-site prior to installation and then placed over the deck joint opening in the joint cutout. The plates shall be centered over the joint opening and secured with locating pins along its centerline. The plates shall be placed end to end, without overlap, such that the gap between plates does not exceed ¼". The plates shall extend to the gutter line and be cut to match the joint's skew angle, where concrete support exists on both sides of the joint. Within APJ installation limits, where concrete support does not exist at both sides of the joint opening (such as where a bridge deck end abuts a bituminous concrete roadway shoulder), bridging plates shall not be installed. Installed bridging plates shall not rock or deflect

in any way. After installation of bridging plates, a thin layer of asphaltic binder shall be applied to all exposed surfaces of the plates.

The remainder of the joint cutout shall then be filled with a mixture of hot asphaltic binder and aggregate prepared in accordance with the submitted Quality Control Plan and the following requirements:

- The aggregate shall be heated in a vented, rotating drum mixer by the use of a hot-compressed air lance to a temperature of between 370° F. to 380° F. This drum mixer shall be dedicated solely for the heating and, if necessary, supplemental cleaning of the aggregate. Venting of the gas and loose dust particles shall be accomplished through ¼” drilled holes spaced no more than 3” on center in any direction along the entire outside surface of the drum
- Once the aggregate has been heated, it shall then be transferred to a secondary drum mixer where it shall be fully coated with asphaltic binder. A minimum of two gallons of binder per 100lbs of stone is required.
- The temperature of the aggregate and binder shall be monitored by the contractor with a calibrated digital infrared thermometer.
- The coated aggregate shall be loosely placed in the joint cutout in lifts not to exceed 2 inches.
- Each lift shall be leveled, compacted and then flooded with hot asphaltic binder to the level of the aggregate to fill all voids in the coated aggregate layer. The surface of each lift shall be flooded until only the tips of the aggregate protrude out of the surface.
- The final lift shall be placed such that no stones shall project above the level of the adjacent overlay surface following compaction of the coated aggregate.
- Following installation of the final lift, sufficient time and material shall be provided to allow all voids in the mixture to fill. This step may be repeated as needed.
- The joint shall then be top-dressed by heating the entire area with a hot-compressed air lance and applying binder. The final joint surface must be smooth with no protruding stones and be absent of voids.
- Once top-dressed, the joint shall have an anti-tack material spread evenly over the entire surface to prevent tracking.

The Contractor shall be responsible for removing all binder material that leaks through the joint and is deposited on any bridge component, including underside of decks, headers, beams, diaphragms, bearings, abutments and piers.

Traffic shall not be permitted over the joint until it has cooled to 130° F when measured with a digital infrared thermometer. Use of water to cool the completed joint is permitted.

Sidewalk, parapet, and/or curb joint openings

Before placement of any sealing materials in parapets, curbs, or sidewalks, the joints shall be thoroughly cleaned of all scale, loose concrete, dirt, dust, or other foreign matter by abrasive blast cleaning. Residual dust and moisture shall then be removed by blasting with oil free

compressed air using a hot air lance. Projections of concrete into the joint space shall also be removed. The backer rod shall be installed in the joint as shown on the plans. The joint shall be clean and dry before the joint sealant is applied. Under no circumstances is the binder material to be used as a substitute for the joint sealant.

Whenever abrasive blast cleaning is performed under this specification, the Contractor shall take adequate measures to ensure that the abrasive blast cleaning will not cause damage to adjacent traffic or other facilities.

The joint sealant shall be prepared and placed in accordance with the manufacturer's instructions and with the equipment prescribed by the manufacturer. Extreme care shall be taken to ensure that the sealant is placed in accordance with the manufacturer's recommended thickness requirements.

The joint sealant shall be tooled, if required, in accordance with the manufacturer's instructions.

Primer, if required, shall be supplied by the sealant manufacturer and applied in accordance with the manufacturer's instructions.

When the sealing operations are completed, the joints shall be effectively sealed against infiltration of water. Any sealant which does not effectively seal against water shall be removed and replaced at the Contractor's expense.

Any installed joint that exhibits evidence of failure, as determined by the Engineer, such as debonding, cracking, rutting, or shoving of the APJ mixture shall be removed and replaced full-width and full-depth to a length determined by the Engineer at no additional cost to the Town.

Method of Measurement: This work will be measured for payment by the number of cubic feet of "Asphaltic Plug Expansion Joint System" installed and accepted within approved horizontal limits. No additional measurement will be made for furnishing and installing backer rod and joint sealant in the parapets, concrete medians, curbs and/or sidewalks.

Basis of Payment: This work will be paid for at the contract unit price per cubic foot for "Asphaltic Plug Expansion Joint System," complete in place, which price shall include the saw-cutting, removal and disposal of bituminous concrete, membrane waterproofing, existing joint components and sealing elements, the furnishing and placement of the leveling compound, cleaning of the joint surfaces, furnishing and installing bridging plates, the furnishing and installing of the asphaltic plug joint mixture, the cost of furnishing and installing joint sealant in the parapets, concrete medians, curbs and sidewalks, and all other materials, equipment including, but not limited to, portable lighting, tools, and labor incidental thereto. No additional payment shall be made for the 12" wide bridging plates that are required for deck joint openings with widths in excess of 3".

If directed by the Engineer, additional deck repairs will be addressed and paid for under the applicable concrete deck repair items in the Contract.

ITEM # 0521021A - STEEL-LAMINATED ELASTOMERIC BEARINGS

Description: Work under this item shall consist of furnishing and installing steel-laminated elastomeric bearings as shown on the plans, as directed by the Engineer and in accordance with these specifications.

Materials:

1. **Elastomer:** The elastomeric compound, used in the construction of the bearings, shall contain only virgin polychloroprene (Neoprene) as the raw polymer. The elastomer compound shall be low temperature grade 3 (as defined by the testing requirements), have a Shore "A" Durometer hardness as shown on the plans and meet the requirements of the AASHTO Standard Specifications for Highway Bridges, Division II - Construction.

The elastomeric shims shall be neoprene, with a Shore "A" Durometer hardness of 60 and a low temperature grade 3, 1/16" and 1/8" thick and conform to the requirements of the AASHTO Standard Specifications for Highway Bridges, Division II - Construction.

2. **Steel Laminates:** The internal steel laminates, used for reinforcement, shall be a mild rolled steel conforming to ASTM A570M, Grade 36 or 40, ASTM A611, Grade C or D, or an approved equal.
3. **External Load Plates:** The external load plates (sole plates) shall conform to the requirements shown on the plans.

All surfaces of the external load plates shall be abrasive blast cleaned prior to being hot bonded to the bearing during vulcanization. For bearings used on painted steel structures, the surfaces of the external load plates shall be prepared in accordance with the requirements of the special provision "Structural Steel" contained elsewhere within these specifications. For bearings used on weathering steel structures, the surfaces of the external load plates shall be blast cleaned in accordance with the requirements of SSPC-SP6 "Commercial Blast Cleaning".

After fabrication, the external load plates of bearings used on painted steel structures shall be shop coated with primer in accordance with the requirements of the special provision "Structural Steel" contained elsewhere within these specifications.

Adhesive bonding of the elastomer portion of the bearings to the external load plates is not permitted.

4. **Fabrication and Fabrication Tolerances:** The fabrication and fabrication tolerances of elastomeric bearings shall conform to the requirements of the AASHTO Standard Specifications for Highway Bridges, Division II - Construction.

If guide pins or other devices are used to control the side cover over the steel laminates, any exposed portions of the steel laminates shall be sealed by vulcanized patching.

5. Testing: The materials for the elastomeric bearing and the finished bearings themselves shall be subjected to testing. The testing shall conform to the requirements of the AASHTO Standard Specifications for Highway Bridges, Division II - Construction.

Test bearings, in addition to the bearings shown on the plans, shall be furnished for each type (size and thickness) of bearing for destructive testing. The test bearings shall be furnished without external load plates.

6. Marking: Each steel-laminated elastomeric bearing shall have marked on it, with indelible ink, the following: the manufacturer's identification code or symbol, and the month and year of manufacture, the orientation, order number, lot number, bearing identification number, and elastomer type and grade (Neoprene, Grade 3). The markings should be placed on a side of the bearing that is visible after installation.
7. Certification: The Contractor shall furnish a Certified Test Report, confirming that the elastomeric bearings satisfy the requirements of these specifications, in conformance with the requirements set forth in Article 1.06.07.

Construction Methods: Before fabricating any materials, the Contractor shall submit shop drawings to the Engineer, for review and approval, in accordance with Subarticle 1.05.02. These drawings shall include, but not be limited to, the following information: manufacturer's name, complete details of the bearings, material designations, nominal hardness of the elastomer, the quantity of bearings required, including test bearings, and the location of the bearing identification.

Bearing areas, upon which the elastomeric bearings will be set, shall be cleaned of all debris. Bearing areas shall be carefully finished, by grinding if necessary, to a smooth, even, level surface of the required elevation, and shall show no variations from a true plane greater than 1/16 inches over the entire area upon which the elastomeric bearings are to rest.

The elastomeric bearings shall be installed as shown on the plans. The elastomeric bearings shall be installed when the temperature of the ambient air and the bearings is between 40 deg. F to 85 deg. F and has been within this range for at least 2 hours.

Adhesive bonding of the elastomeric bearings to steel and concrete surfaces is not permitted.

Welding, with the elastomeric bearings in place, will not be permitted unless there is more than 1.5 inches of steel between the weld and the elastomer. In no case shall the elastomer be exposed to temperatures greater than 400 deg. F. Welding shall conform to the requirements of Subarticle 6.03.03-6.

Assembly with high strength bolts shall conform to the requirements of Subarticle 6.03.03-19.

The elastomeric bearings shall bear uniformly on all surfaces under full dead load.

Method of Measurement: This work will be measured by the cubic inch of elastomeric bearings installed and accepted. No allowance shall be made for test bearings.

Basis of Payment: This work will be paid for at the contract unit price per cubic inch of "Steel-Laminated Elastomeric Bearing Pads", complete in place, which price shall include all vulcanized external load plates, primer, test bearings and adhesive, materials, equipment, tools and labor incidental thereto.

| Pay Item | Pay Unit |
|---|----------|
| 0521021A - Steel-Laminated Elastomeric Bearings | c.i. |

ITEM #0602936A - DRILLING AND GROUTING REINFORCING BARS

Description: Work under this item shall consist of drilling holes in existing concrete, placing reinforcing bars and grouting the holes at the locations and to the depth shown on the plans, as directed by the Engineer, and in accordance with these specifications.

Materials: Reinforcing bars shall be provided in accordance with the requirements for “Deformed Steel Bars” and/or “Deformed Steel Bars – Epoxy Coated” as noted on the plans.

The grout shall conform to the requirements of Subarticle M.03.01-15.

A Materials Certificate will be required in accordance with Article 1.06.07 certifying the conformance of the grout to the requirements set forth in this specification.

Grout shall be delivered to the job site in the Manufacturer’s original packaging, labeled to include the name of material, Manufacturer’s name, and the Manufacturer's lot/batch number.

All materials must be stored in accordance with the Manufacturer’s written recommendations and as approved by the Engineer.

Construction Methods:

All equipment proposed for use shall be approved by the Engineer prior to actually performing the work.

- A. All holes shall be drilled by means of a rotary impact drill. If reinforcing steel is encountered, the reinforcing steel shall be cut and removed by means of a core drill. The remainder of the drilling shall be done with the rotary impact drill.
- B. Drilling with a lubricant will not be permitted. Water is not considered a lubricant. Drilling methods shall not cause spalling, or other damage to concrete. Concrete spalled, or otherwise damaged by the Contractor's operations shall be repaired in a manner satisfactory to the Engineer. Such repair shall be done at the expense of the Contractor.
- C. Holes shall be surface dry and shall have had all foreign and loose material removed immediately prior to grout placement.
- D. Grout shall be mixed and placed in strict accordance with the manufacturer's instructions, unless modified here, or elsewhere, in the contract documents. No grout shall be placed at a temperature below that recommended by the grout manufacturer.
- E. Prior to placement of reinforcing bar in the grouted hole, all material which might interfere with bond between the bar and the grout shall have been removed. This includes, but is not limited to: moisture, grease, dirt, mill scale and rust. Rust which cannot be removed even by vigorous scrubbing with a wire brush is considered firmly bonded and may remain. The hole diameter shall be in accordance with the grout manufacturer's recommendation. The reinforcing bar shall be inserted full depth into the hole and shall be manipulated to ensure complete coverage by the grout. After insertion

of the reinforcing bar, all excess grout shall be struck-off flush with the concrete face. Should the grout fail to fill the hole after bolt insertion, additional grout shall be added to the hole to allow a flush strike-off.

- F. If the reinforcing bar is inserted in a hole with an axis predominantly horizontal to the ground surface, care shall be taken to prevent grout from running down the face of the concrete. These precautions shall be done in a manner satisfactory to the Engineer.

Method of Measurement: This work will be measured for payment as the number of liner feet of holes into which grout and reinforcing bars have been installed and accepted, measured along the centerline of hole. Measurement will be taken to the nearest tenth of a foot (0.1 ft).

Basis of Payment: Drilling and grouting reinforcing bars will be paid for at the contract unit price per linear foot (l.f.) which price shall include locating and drilling hole, placing reinforcing steel, grouting hole and all materials, equipment, tools, labor and work incidental thereto. The cost for furnishing and fabricating reinforcing bar will be included in the cost for “Deformed Steel Bars” and/or “Deformed Steel Bars – Epoxy Coated” as noted on the plans.

| Pay Item | Pay Unit |
|--|----------|
| Drilling and Grouting Reinforcing Bars | l.f. |

ITEM #0603591A - STRUCTURAL STEEL - MISCELLANEOUS

Description: Work under this item shall consist of fabrication, delivery and erection of structural steel for support of the gas main at the north bridge fascia.

The anticipated supports are shown schematically on the project plans based on the size and location of the existing gas main. Prior to fabricating the structural steel, the Contractor shall contact Eversource Gas to ensure that the proposed utility supports are coordinated with the details of the proposed replacement gas main, including the size, type and location of the proposed pipe as well as any insulation and protective covering that may be required. See "Notice to Contractor - Utility Coordination" for contact information. Any proposed changes to the utility support locations and details shall be brought to the attention of the engineer immediately.

Materials: Structural shapes, plates and rods shall be of the grade indicated on the contract plans and shall conform to the requirements of Form 817, Section M.06.02.

Structural steel and hardware shall be galvanized after fabrication.

Submittals:

Shop drawings for the structural steel gas main supports. As part of the shop drawing submission, provide catalogue cuts for any rollers, hold-down devices or other such appurtenances that will support the proposed gas main. If catalogue cuts include multiple sizes of appurtenances, identify the appropriate size.

Mill certificates for structural steel and proof of U.S. origin.

Construction Methods: Field welding and field drilling of the utility supports will not be permitted.

Method of Measurement: Structural Steel - Miscellaneous shall be measured for payment based on the weight of the fabricated members in hundreds of pounds.

No direct payment will be made for galvanizing; the cost thereof shall be included in the unit price of Structural Steel - Miscellaneous.

Basis of Payment: The structural steel, incorporated in the completed and accepted structure, will be paid for at the Contract unit price per hundredweight for Structural Steel - Miscellaneous. Payment shall be for structural steel, complete in place, which price shall include quality control, furnishing, fabricating, galvanizing, transporting, storing, erecting, and all materials, equipment, tools and labor incidental thereto.

| | |
|----------------------------------|----------|
| Pay Item | Pay Unit |
| Structural Steel - Miscellaneous | CWT |

ITEM #0707009A - MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)

Description: Work under this item consists of furnishing and installing a seamless elastomeric waterproofing membrane system applied to a concrete or steel surface as shown on the plans, in accordance with this specification and as directed by the Engineer. Work shall also include conditioning of the surface to be coated and all quality-control testing noted herein.

The completed membrane system shall be comprised of a primer coat followed by the membrane coating which is applied in one or two layers for a minimum total thickness of 80 mil, an additional 40 mil membrane layer with aggregate broadcast into the material while still wet, and a bond coat of bitumen-based adhesive material.

Materials: The Contractor shall select a waterproofing membrane system from the Department's current Qualified Product List (QPL) for Spray-Applied Membrane Waterproofing System. All materials incorporated in the works shall meet the Manufacturer's specification for the chosen system. The Engineer will reject any system that is not on the QPL.

Materials Certificate: The Contractor shall submit to the Engineer a Materials Certificate for the primer and membrane and bond coat material in accordance with the requirements of Article 1.06.07.

Construction Methods: At least ten days prior to installation of the membrane system, the Contractor shall submit to the Engineer, the manufacturer's recommended procedure for preparing the deck surface, pre-treatment or preparing at cracks and gaps, treatment at curbs, vertical surfaces or discontinuities, applying the primer and membrane, and placing of aggregated coat. Procedures shall also include recommended repairs of system non-compliant issues identified during application. The system shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the Manufacturer's recommendations.

A technical representative, in the direct employ of the manufacturer, shall be present on-site immediately prior to and during application of the membrane. The representative shall inspect and approve the surface prior to priming, and provide guidance on the handling, mixing and addition of components and observe application of the primer and membrane. The representative shall perform all required quality-control testing and remain on the Project site until the membrane has fully cured.

All quality-control testing, including verbal direction or observations on the day of the installation, shall be recorded and submitted to the Engineer for inclusion in the Project's records. A submittal of the quality-control testing data shall be received by project personnel prior to any paving over the finished membrane or within 24 hours following completion of any staged portion of the work.

1. **Applicator Approval:** The Contractor's membrane Applicator shall be fully trained and licensed by the membrane manufacturer and shall have successfully completed at least three spray membrane projects in the past five years. The Contractor shall furnish references from those projects, including names of contact persons and the names, addresses and phone numbers of persons who supervised the projects. This information shall be submitted to the Engineer prior to the start of construction. The Engineer shall have sole authority to determine the adequacy and compliance of the submitted information. Inadequate proof of ability to perform the work will be grounds to reject proposed applicators.

2. **Job Conditions:**

(a) **Environmental Requirements:** Air and substrate temperatures shall be between 32°F and 104°F providing the substrate is above the dew point. Outside of this range, the Manufacturer shall be consulted.

The Applicator shall be provided with adequate disposal facilities for non hazardous waste generated during installation of the membrane system. The applicator shall follow safety instructions regarding respirators and safety equipment.

(b) **Safety Requirements:** All open flames and spark producing equipment shall be removed from the work area prior to commencement of application.

"No Smoking" signs shall be visibly posted at the job site during application of the membrane waterproofing.

Personnel not involved in membrane application shall be kept out of the work area.

3. **Delivery, Storage and Handling:**

(a) **Packaging and Shipping:** All components of the membrane system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the products type and batch number.

(b) **Storage and Protection:** The Applicator shall be provided with a storage area for all components. The area shall be cool, dry and out of direct sunlight and shall be in accordance with the Manufacturer's recommendations and relevant health and safety regulations.

Copies of Material Safety Data Sheets (MSDS) for all components shall be kept on site for review by the Engineer or other personnel.

(c) **Shelf Life - Membrane Components:** Packaging of all membrane components shall include a shelf life date sealed by the Manufacturer. No membrane components whose shelf life has expired shall be used.

4. Surface Preparation:

- (a) Protection: The Applicator shall be responsible for the protection of equipment and adjacent areas from over spray or other contamination. Parapets and bridge joints shall be masked prior to application of the materials.
- (b) Surface Preparation: Sharp peaks and discontinuities shall be ground smooth. The surface profile of the prepared substrate is not to exceed 1/4 inch (peak to valley) and areas of minor surface deterioration of 1/2 inch and greater in depth shall also be repaired. The extent and location of the surface patches require the approval of the Engineer before the membrane system is applied.

Surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae, growth, laitance, friable matter, dirt, bituminous products, and previous waterproofing materials. If required, degreasing shall be done by detergent washing in accordance with ASTM D4258.

The surface shall be abrasively cleaned, in accordance with ASTM D4259, to provide a sound substrate free from laitance.

Voids, honeycombed areas, and blow holes on vertical surfaces shall be repaired in the same manner.

All steel components to receive membrane waterproofing shall be blast cleaned in accordance with SSPC SP6 and coated with the membrane waterproofing system within the same work shift.

5. Inspection and Testing: Prior to priming of the surface, the Engineer, Applicator and Manufacturer's technical representative shall inspect and approve the prepared substrate.

- (a) Random tests for deck moisture content shall be conducted on the substrate by the Applicator at the job site using a "Sovereign Portable Electronic Moisture Master Meter," a "Tramex CMEXpertII Concrete Moisture Meter" or approved equal. The minimum frequency shall be one test per 1000 s.f. but not less than three tests per day per bridge. Additional tests may be required if atmospheric conditions change and retest of the substrate moisture content is warranted.

The membrane system shall not be installed on substrate with a moisture content greater than that recommended by the system's manufacturer, but shall not be greater than 6%, whichever is less.

- (b) Random tests for adequate tensile bond strength shall be conducted on the substrate using an adhesion tester in accordance with the requirements of ASTM D4541. The minimum frequency shall be one test per 5,000 s.f. but not less than three adhesion tests per bridge.

Adequate surface preparation will be indicated by tensile bond strengths of primer to the substrate greater than or equal to 150 psi or failure in a concrete surface and greater than or equal to 300 psi for steel surfaces.

If the tensile bond strength is lower than the minimum specified, the Engineer may request additional substrate preparation. Any primer not adequately applied shall be removed and a new primer applied at the Contractor's expense, as directed by Engineer.

- (c) Cracks and grouted joints shall be treated in accordance with the Manufacturer's recommendations, as approved or directed by the Engineer.

6. Application:

- (a) The System shall be applied in four distinct steps as follows:
 - 1) Substrate preparation and gap/joint bridging preparation
 - 2) Priming
 - 3) Membrane application
 - 4) Membrane with aggregate
- (b) Immediately prior to the application of any components of the System, the surface shall be dry (see Section 5a of this specification) and any remaining dust or loose particles shall be removed using clean, dry oil-free compressed air or industrial vacuum.
- (c) Where the area to be treated is bound by a vertical surface (e.g. curb or wall), the membrane system may be continued up the vertical, as shown on the plans or as directed by the Engineer.
- (d) The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results, in accordance with the Manufacturer's recommendations or as approved or directed by the Engineer.
- (e) A neat finish with well defined boundaries and straight edges shall be provided by the Applicator.
- (f) Primer: The primer shall consist of one coat with an overall coverage rate of 125 to 175 s.f./gal unless otherwise recommended in the manufacturer's written instructions.

All components shall be measured and mixed in accordance with the Manufacturer's recommendations.

The primer shall be spray applied using a single component spray system approved for use by the Manufacturer. If required by site conditions and allowed by the manufacturer, brush or roller application will be allowed.

The primer shall be allowed to cure tack-free for a minimum of 30 minutes or as required by the Manufacturer's instructions, whichever time is greater, prior to application of the first lift of waterproofing membrane.

Porous concrete (brick) may require a second coat of primer should the first coat be absorbed.

- (g) Membrane: The waterproofing membrane shall consist of one or two coats for a total dry film thickness of 80 mils. If applied in two coats, the second coat shall be of a contrasting color to aid in quality assurance and inspection.

The membrane shall be comprised of Components A and B and a hardener powder which is to be added to Component B in accordance with the Manufacturer's recommendations.

The substrate shall be coated in a methodical manner.

Thickness checks: For each layer, checks for wet film thickness using a gauge pin or standard comb-type thickness gauge shall be carried out typically once every 100 s.f. Where rapid set time of the membrane does not allow for wet film thickness checks, ultrasonic testing (steel surfaces only), calibrated point-penetrating (destructive) testing, in-situ sampling (cutout of small sections for measuring thicknesses), or other methods approved by the Engineer shall be employed for determination of dry film thickness. The measured thickness of each and every individual test of the membrane shall be greater than or equal to the required thickness.

Bond Strength: Random tests for adequate tensile bond strength shall be conducted on the membrane in accordance with the requirements of ASTM D4541. The minimum test frequency shall be one test per 5,000 s.f. but no less than three adhesion tests per bridge. Adequate adhesion will be indicated by tensile bond strengths of the membrane to the substrate of greater than or equal to 150 psi or failure in a concrete surface and greater than or equal to 300 psi for steel surfaces.

Spark Testing: Following application of the membrane, test for pin holes in the cured membrane system over the entire application area in accordance with ASTM D4787- "Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates." Conduct the test at voltages recommended by the manufacturer to prevent damage to the membrane.

Repair the membrane system following destructive testing and correct any deficiencies in the membrane system or substrate noted during quality-control testing in accordance with the manufacturer's recommendations to the satisfaction of the Engineer at no additional cost to the Town.

- (h) Repairs: If an area is left untreated or the membrane becomes damaged, a patch repair shall be carried out to restore the integrity of the system. The damaged areas shall be cut back to sound materials and wiped with solvent (e.g. acetone) up to a width of at least four inches on the periphery, removing any contaminants unless otherwise recommended by the manufacturer. The substrate shall be primed as necessary, followed by the membrane. A continuous layer shall be obtained over the substrate with a four inches overlap onto existing membrane.

Where the membrane is to be joined to existing cured material, the new application shall overlap the existing by at least four inches. Cleaning and surface preparation on areas to be lapped shall be as recommended in the manufacturer's written instructions.

- (i) Aggregated Finish:
- 1) Apply an additional 40 mil thick layer of the membrane material immediately followed by an aggregate coating, before the membrane cures, at a rate to fully cover the exposed area. The membrane and aggregate shall be fully integrated after the aggregate has been applied and the membrane cured.
 - 2) Localized areas not fully coated shall be touched-up with additional membrane and aggregate as needed.
 - 3) Remove loose and excess aggregate from the surface to the satisfaction of the Engineer and dispose of properly after application prior to allowing traffic onto finished surface or application of tack coat.
- (j) Bond Coat:
Prior to application of a bituminous concrete overlay, the aggregated finish shall be coated with a bonding material. The bonding material shall be per the membrane waterproofing manufacturer's recommendations.

7. Final Review: The Engineer and the Applicator shall jointly review the area(s) over which the completed System has been installed. Any irregularities or other items that do not meet the requirements of the Engineer shall be addressed at this time.

Method of Measurement: The quantity to be paid for under this item shall be the number of square yards of waterproofed surface completed and accepted.

Basis of Payment: This item will be paid for at the contract unit price per square yard of "Membrane Waterproofing (Cold Liquid Elastomeric)," complete in place, which price shall include all surface preparation, furnishing, storing and applying the system, technical representative and quality control tests, and any necessary repairs and remediation work as well as all materials, equipment, tools, labor incidental to this work.

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| Membrane Waterproofing (Cold Liquid Elastomeric) | s.y. |

ITEM #0822005A-TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE)

Description:

Work under this item shall consist of furnishing, installing and removing temporary precast concrete barrier curb as shown on the plans or as directed by the Engineer. This work shall also include the furnishing and installing of anchor bolts, and the later removal of anchor bolts at the specific locations shown on the plans.

Materials:

1. Concrete shall conform to the requirements of Article M.14.01 amended as follows:
 - (a) Concrete shall have a minimum 28 days strength (f 'c) of 3,000 PSI.
 - (b) Coarse Aggregate shall conform to the requirements of M.03.01-1 and to the grading requirements of Class "F".
 - (c) Fine Aggregate shall be light in color and shall conform in color and type to the samples on file at the Laboratory of the Department of Transportation located in Rocky Hill, Connecticut.
 - (d) Cement for light concrete shall be Type III or Type IIIA Portland Cement or light colored cement approved by the Engineer.
 - (e) The entrained air content shall not be less than 5% nor more than 7%.
 - (f) Manufacturer identification and casting date of manufacture shall be permanently marked on the barrier curb by means of a non-corrosive metal or plastic tag as approved by the Engineer and in the location shown on the plans.
2. Reinforcing steel shall conform to the requirements of ASTM A615, Grade 420.
3. Lifting hooks, keys, bolts, devices and attachments shall be of the size indicated on the plans or of a design satisfactory for the purpose intended as approved by the Engineer.
4. Removable anchor bolts shall conform to ASTM A325 with washers conforming to ASTM A709 Grade 50. The anchor bolts, nuts and washers shall be mechanically galvanized in accordance with ASTM B695 Class 50.
5. Resin coating shall conform to "KELISLIP" as manufactured by Kelken-Gold, Inc., Suite 1000, CN5330, Princeton, New Jersey 08543, or approved equal.
6. The adhesive bonding material shall be a resin compound specially formulated to anchor steel bars in holes drilled into concrete for the purpose of resisting tension pull-out. The adhesive bonding material shall be selected from the Connecticut Department of Transportation Approved Product List and shall be compatible with the resin coating.

7. The grout used in patching the remaining holes in the new concrete deck after the removal of the temporary barrier shall be non-shrink grout conforming to Article M.03-01-12.
8. Temporary precast concrete barrier curb shall be accepted on the basis of the manufacturer's certification, as defined in Article M.08.02-4.
9. The delineators shall be fabricated of aluminum, steel, plastic or of a material approved by the Engineer. The reflective sheeting shall be encapsulated lens sheeting conforming to M.18.09.01. Delineator fastening hardware or adhesive shall be suitable for the purpose intended.

Construction Methods:

1. Fabrication: Concrete barrier units shall be precast in an approved plant in conformance with the applicable requirements of Subarticles 5.14.03-4, 6, 7, 8 and 15 supplemented as follows:

Forms for precast concrete barrier units shall be of substantial construction, so as to produce a smooth dense surface with a uniform appearance. Form oil shall be a non-staining type. Pockets for anchor bolts shall be formed as shown on the plans. Air holes on exposed surfaces shall be filled immediately after removal of the forms to the satisfaction of the Engineer.

2. Installation: Temporary precast concrete barrier units shall be placed as shown on the plans or as directed by the Engineer, on a firm even surface as to produce a smooth continuous barrier curb.

Holes shall be drilled into the concrete deck at the locations and at the spacing required for the proper anchoring using the adhesive bonding system. Holes shall be drilled to the size and depth determined by the manufacturer of the adhesive bonding material. The embedment depth shall be sufficient to ensure that the pull out strength of the grouted anchor bolt satisfies the design load as shown on the plans.

The anchor bolts shall be treated with a resin coating that will permit removal of the bolt after it has been anchored into the deck.

The Contractor shall submit the following to the Engineer for approval; type of drill, diameter of bit, method of cleaning holes, and method of placement of adhesive bonding material. Specifications and recommendations for the aforementioned may be obtained from the manufacturer of the adhesive bonding material. The weight of the drill shall not exceed 9 kilograms.

Drilling methods shall not cause spalling, cracking, or other damage to the concrete. Those areas damaged by the Contractor shall be repaired by him in a manner suitable to the Engineer and at no expense to the Town.

Care shall be taken not to drill holes into or through structural steel.

For the adhesive bonding material, a Materials Certificate will be required in accordance with Article 1.06.07, confirming the conformance of the adhesive bonding material to the requirements set forth in these specifications.

The adhesive bonding material and the anchor bolts shall be installed in accordance with the written directions supplied by the manufacturer of the adhesive bonding material.

The temporary concrete barrier shall be maintained by the Contractor during all stages of construction. Any damaged material shall be removed and replaced by the Contractor at his expense.

When temporary barrier is no longer required, it shall be removed from the work site and become the property of the Contractor.

3. Patching Holes: After removal of the concrete barriers, the holes in the new concrete deck shall be blown clean with an air jet. The grout shall then be mixed and placed as shown on the plans and in strict accordance with the manufacturer's direction.
4. Alternate Anchorage Designs: For alternate anchorage designs of temporary precast concrete barrier curb (structure), two sets of complete design calculations along with shop drawings shall be submitted to the Engineer for review.
5. Delineator: The delineator shall be installed in the center on top of the barrier at the locations designated on the plans. They may be fastened by hardware or adhesive and must be maintained in good condition at all times.

DE-7 delineators shall be used when the barriers are on the right side of traffic or dividing traffic in the same direction. DE-7A delineators shall be used when the barriers are on the left side of traffic. DE-7B delineators shall be used when the barriers divide opposing traffic lanes. DE-7C delineators shall be used with the yellow side on the left side of traffic when traffic is alternated.

Method of Measurement:

This work will be measured for payment along the centerline of the top of the concrete barrier and will be the actual number of linear feet of temporary concrete barrier furnished, installed and accepted.

Basis of Payment:

This work will be paid for at the contract unit price per linear foot for "Temporary Precast Concrete Barrier Curb (Structure)", complete in place, which price shall include all furnishing, transportation, storage, materials, including concrete, reinforcing steel, connecting rods, removable anchor bolts, drilling holes in the deck, initial installation, removal hole patching and also including hardware and incidental materials, equipment, tools, and labor incidental thereto. Any temporary barriers that become lost, damaged or defaced shall be replaced by the Contractor at no cost to the Town.

Pay Item
Temporary Precast Concrete Barrier Curb (Structure)

Pay Unit
LF

ITEM #0904487A - METAL BRIDGE RAIL (HANDRAIL)

Description: Work under this item shall consist of fabricating and installing a metal bridge railing, consisting of extruded aluminum rail and aluminum plate support bracket connected to preset anchorages, as shown on the plans, as directed by the Engineer and in accordance with this specification.

Materials: Materials for this work shall conform to the following requirements:

1. Metal Bridge Rail:

The pipe rail, pipe sleeve, and splice pipe shall be extruded aluminum and conform to the requirements of ASTM B429, 6061-T6.

Pipe rail shall be 3" diameter IPS schedule 40 round pipe. Pipe sleeve shall be 3 ½" IPS schedule 80 round pipe. Splice pipe shall be 2 ½" IPS schedule 40 round pipe.

The support bracket for the rail shall be made of aluminum plate and conform to the requirements of ASTM B209, 6061-T6.

Bolts and set screws shall unified be stainless steel and conform to the requirements of ASTM A193, Class 2, Grade B8 (UNS designation S 30400 (304)). Washers shall be stainless steel and conform to the requirements of ASTM A276, Types 304 annealed.

2. Preset Anchorage:

The preset anchorage shall be fabricated as detailed on the contract plans. Preset anchorages configured differently from those detailed on the plans may be used provided they utilize the same materials described below and are approved by the Engineer prior to fabrication.

The wire struts shall be cold-drawn and conform to ASTM A510, Grade 1030 with minimum tensile strength of 100 ksi. These wire struts shall be securely welded to the ferrules with the welds capable of developing the tensile strength of the struts and the ferrules. Steel welding shall be in accordance with the American Welding Society "Structural Welding Code-Steel", ANSI/AWS D1.1-2006.

The ferrules, either open end or closed end, shall conform to ASTM A108, Grade 12L14. A plastic cap shall be provided for sealing the bottom of each open end ferrule before placing concrete. Closed end ferrules shall provide a minimum full thread length of 2". Removable plastic washers of the same diameter as the ferrules and approximately 3/32" in thickness shall be provided for the top of each ferrule and shall be left in place until the temporary supporting bolts are removed. Removable plastic caps shall be provided for sealing the top of each ferrule until the erection of railing posts.

After fabrication, the preset anchorage shall be hot-dip galvanized in accordance with ASTM A123. The bolts shall be "free running" in the ferrules after galvanization.

Bolts for the preset anchorage shall be stainless steel heavy hex head and shall conform to the requirements of ASTM F738M, Group 1 (AISI Type 304). The manufacturer's symbol and the grade shall be clearly marked on the bolt heads. Nuts shall be stainless steel and conform to the requirements of ASTM F836M, Group 1 (AISI Type 304). Washers shall be stainless steel and conform to the requirements of ASTM A167, Types 302 through 305.

4. Molded Pads:

Molded pads shall be manufactured from new unvulcanized elastomer and unused synthetic fibers, with a weight proportion of fiber content equal to approximately one-half of the total weight of the pad. The pads shall be formed into single sheets of 1/8" minimum thickness, with a tolerance of plus or minus 10 percent. Pads shall have a Shore A Durometer hardness within the range of 70 to 90.

The Contractor shall furnish a Materials Certificate in conformance with the requirements of Article 1.06.07 for the following materials: rails, rail sleeves, support brackets, post connections devices, rail splices, preset anchorages, bolts, washers and molded pads.

A sample preset anchorage, and samples of all sizes of bolts and washers used with the metal bridge rail, shall be submitted to the Engineer for approval prior to incorporation into the project.

Construction Methods: Before fabricating any materials, the Contractor shall submit shop drawings to the Engineer for approval in accordance with Article 1.05.02. These drawings shall include but not be limited to the following information: The layout plan showing all railing support bracket spacings, expansion joint locations, and material designations.

Aluminum welding shall be in accordance with the American Welding Society "Structural Welding Code-Aluminum", ANSI/AWS D1.2-2003.

The preset anchorages shall be fabricated for installation perpendicular to the grade of the parapet. The anchorages shall be firmly and accurately held in position prior to and during the placing of concrete.

The railings shall be accurately fabricated and installed as shown on the plans. Lengths of rail elements shall be continuous over a minimum of four rail posts wherever possible and in no case less than two. Welding of two or more rails to form an element will not be allowed. Rail splices shall be located between the support brackets. Splice bars shall have a sliding fit in the rail sections.

One section of rail shall be attached to the splice pipe using a pair of stainless steel set screws. This will secure the rail in place and allowing the rail to move into the mated section.

Posts shall be installed plumb.

For structures having railings with a radius of 410 feet or more, the railing may be sprung into place. For structures having railings with a radius of less than 410 feet, the railing shall be curved. Curving may be done by cold bending or by hot bending. Hot bending shall be done in accordance with Article 6.3 - Heating, of the "Specifications for Aluminum Structures".

Aluminum railings shall be carefully adjusted prior to fixing in place to insure proper matching at abutting joints and correct alignment and curvature throughout their length. After installation, all rails and posts shall be free of burrs, sharp edges and irregularities.

The open ends of the pipe rails shall be closed using an end cap.

Method of Measurement: This work will be measured for payment by the actual number of feet of metal bridge rail completed and accepted, measured along the rail from one rail end anchorage to the other rail end anchorage.

Basis of Payment: This work will be paid for at the contract unit price per foot for "Metal Bridge Rail (Handrail) complete and accepted in place, which price shall include all materials, equipment, tools, labor and work incidental thereto.

ITEM #0969060A - CONSTRUCTION FIELD OFFICE, SMALL

Description: Under the item included in the bid document, adequate weatherproof office quarters with related furnishings, materials, equipment and other services, shall be provided by the Contractor for the duration of the work, and if necessary, for a close-out period determined by the Engineer. The office, furnishings, materials, equipment, and services are for the exclusive use of Town forces and others who may be engaged to augment Town forces with relation to the Contract. The office quarters shall be located convenient to the work site and installed in accordance with Article 1.08.02. This office shall be separated from any office occupied by the Contractor. Ownership and liability of the office quarters shall remain with the Contractor.

Furnishings/Materials/Supplies/Equipment: All furnishings, materials, equipment and supplies shall be in like new condition for the purpose intended and require approval of the Engineer.

Office Requirements: The Contractor shall furnish the office quarters and equipment as described below:

| Description \ Office Size | Small |
|---|-------|
| Minimum Sq. Ft. of floor space with a minimum ceiling height of 7 ft. | 200 |
| Minimum number of exterior entrances. | 1 |
| Minimum number of parking spaces. | 4 |

Office Layout: The office shall have a minimum square footage as indicated in the table above, and shall be partitioned as shown on the building floor plan as provided by the Engineer.

Tie-downs and Skirting: Modular offices shall be tied-down and fully skirted to ground level.

Lavatory Facilities: The Contractor shall furnish a toilet facility at a location convenient to the field office for use by Town personnel and such assistants as they may engage. For all facilities the Contractor shall supply lavatory and sanitary supplies as required.

Windows and Entrances: The windows shall be of a type that will open and close conveniently, shall be sufficient in number and size to provide adequate light and ventilation, and shall be fitted with locking devices, blinds and screens. The entrances shall be secure, screened, and fitted with a lock for which four keys shall be furnished. All keys to the construction field office shall be furnished to the Town and will be kept in their possession while Town personnel are using the office. Any access to the entrance ways shall meet applicable building codes, with appropriate handrails. Stairways shall be ADA/ABA compliant and have non-skid tread surfaces.

Lighting: The Contractor shall equip the office interior with electric lighting that provides a minimum illumination level of 100 foot-candles at desk level height, and electric outlets for each desk and drafting table. The Contractor shall also provide exterior lighting that provides a minimum illumination level of 2 foot-candles throughout the parking area and for a minimum distance of 10 ft. on each side of the field office.

Parking Facility: The Contractor shall provide a parking area, adjacent to the field office, of sufficient size to accommodate the number of vehicles indicated in the table above. If a paved parking area is not readily available, the Contractor shall construct a parking area and driveway consisting of a minimum of 6 inches of processed aggregate base graded to drain. The base material will be extended to the office entrance.

Field Office Security: Physical Barrier Devices - This shall consist of physical means to prevent entry, such as: 1) All windows shall be barred or security screens installed; 2) All field office doors shall be equipped with dead bolt locks and regular day operated door locks; and 3) Other devices as directed by the Engineer to suit existing conditions.

Electric Service: The field office shall be equipped with an electric service panel, wiring, outlets, etc., to serve the electrical requirements of the field office, including: lighting, general outlets, computer outlets, calculators etc., and meet the following minimum specifications:

- A. 120/240 volt, 1 phase, 3 wire
- B. Ampacity necessary to serve all equipment. Service shall be a minimum 100 amp dedicated to the construction field office.
- C. The electrical panel shall include a main circuit breaker and branch circuit breakers of the size and quantity required.
- D. Additional 120 volt, single phase, 20 amp, isolated ground dedicated power circuit with dual NEMA 5-20 receptacles will be installed at each desk and personal computer table (workstation) location.
- E. Additional 120 volt, single phase, 20 amp, isolated ground dedicated power circuit with dual NEMA 5-20 receptacles will be installed, for use by the Telephone Company.
- F. Additional 120-volt circuits and duplex outlets as required meeting National Electric Code requirements.
- G. One exterior (outside) wall mounted GFI receptacle, duplex, isolated ground, 120 volt, straight blade.

Heating, Ventilation and Air Conditioning (HVAC): The field office shall be equipped with sufficient heating, air conditioning and ventilation equipment to maintain a temperature range of 68°-80° Fahrenheit within the field office.

The following furnishings and equipment shall be provided:

| Furnishing Description | Quantity |
|---|----------|
| Office desk (2.5 ft. x 5 ft.) with drawers, locks, and matching desk chair that have pneumatic seat height adjustment and dual wheel casters on the base. | 1 |
| Personal computer tables (4 ft. x 2.5 ft.). | 1 |
| Drafting type tables (3 ft. x 6 ft.) and supported by wall brackets and legs; and matching drafters stool that have pneumatic seat height adjustment, seat back and dual wheel casters on the base. | 1 |
| Office Chairs. | 2 |

| | |
|--|---|
| Fire resistant cabinet (legal size/4 drawer), locking. | 1 |
| Vertical plan racks for 2 sets of 2 ft. x 3 ft. plans for each rack. | 1 |
| Case of cardboard banker boxes (Min 10 boxes/case) | 1 |
| Open bookcase – 3 shelves – 3 ft. long. | 1 |
| White Dry-Erase Board, 36" x 48" min. with markers and eraser. | 1 |
| Coat rack or hooks with min. 4 coat capacity | 1 |
| Wastebaskets - 30 gal., including plastic waste bags. | 1 |
| Wastebaskets - 5 gal., including plastic waste bags. | 1 |
| Telephone. | 1 |
| Full size stapler 20 (sheet capacity, with staples) | 1 |
| Desktop tape dispensers (with Tape) | 1 |
| 8 Outlet Power Strip with Surge Protection | 3 |
| Rain Gauge | 1 |
| Mini refrigerator - 3.2 c.f. min. | 1 |
| Hot and cold water dispensing unit. Disposable cups and bottled water shall be supplied by the Contractor for the duration of the project. | 1 |
| Microwave, 1.2 c.f. , 1000W min. | 1 |
| Fire extinguishers - provide and install type and *number to meet applicable State and local codes for size of office indicated, including a fire extinguisher suitable for use on a computer terminal fire. | * |
| Electric pencil sharpeners. | 1 |
| Electronic office type printing calculators capable of addition, subtraction, multiplication and division with memory and a supply of printing paper. | 1 |
| Small Multi-Function Laser Printer/Copier/Scanner/Fax combination unit, network capable, as specified below under <u>Computer Related Hardware and Software</u> . | 1 |
| Computer System as specified below under computer Hardware and Software. All supplies and maintenance shall be provided by the Contractor | 1 |
| Digital Camera as specified below under <u>Computer Related Hardware and Software</u> . | 1 |
| Infrared Thermometer, including annual third party certified calibration, case, and cleaning wipes. | 1 |
| Concrete Curing Box as specified below under Concrete Testing Equipment. | 1 |
| Concrete Air Meter and accessories as specified below under Concrete Testing Equipment as specified below. Contractor shall provide third party calibration on a quarterly basis. | 1 |
| Concrete Slump Cone and accessories as specified below under Concrete Testing Equipment. | 1 |
| First Aid Kit | 1 |

The furnishings and equipment required herein shall remain the property of the Contractor. Any supplies required to maintain or operate the above listed equipment or furnishings shall be provided by the Contractor for the duration of the project.

Telephone Service: For a Small field office this shall consist of the installation of two (2) telephone lines: one (1) line for phone/voice service and one (1) line dedicated for the facsimile machine. The Contractor shall pay all charges.

Internet Service: Contractor shall supply a broadband internet connection with at least a speed of 6 Mbps. A router shall be provided with both Ethernet connections and type “N” wireless service. Modem and router shall be located in the construction field office.

Computer Hardware and Software: Laser Copier/Scanner/Fax, Computer Systems, and Digital Camera(s) shall comply with the posted requirements at Departments web site www.ct.gov/dot DOING BUSINEES WITH CTDOT > Contractor Resources > Computer Hardware and Software.

Before ordering the computer hardware and software, the Contractor must submit a copy of their proposed order(s) with catalog cuts and specifications for review by the Town. Computer hardware and software proposed at a minimum must comply with requirements in place 30 days before submission.

Once the Contract has been completed, the computer equipment, printer and camera will be returned to and remain the property of the Contractor.

A) Computer – Minimum Specification:

- Monitor – 24.0 inch minimum LCD color monitor.
- Keyboard – 104+ Keyboard.
- Mouse – Optical 2-button mouse with scroll wheel.
- Security cable and lock for laptop.

B) Laser Printer – Minimum Specification:

Note B1: The Town Project Engineer will provide the Contractor with a copy of the current PC/printer specifications and approved printer list as soon as possible after the contract is awarded.

Note B2: It is acceptable to substitute a multi-function all-in-one printer/copier/scanner/fax machine listed on the approved printer list in place of the required laser printer and fax machine.

Note B3: Printer must be capable of printing and scanning 11”x17” pages.

Note B4: It is acceptable to provide an ink jet printer to print 11”x17” format in addition to a laser printer for 8.5”x11” format.

C) Digital Camera – Minimum Specification:

- Optical – 5 megapixel, with 3x optical zoom.
- Memory – 16 GB.
- Features – Date/time stamp feature.

Connectivity – memory card reader.
Software – Must be compatible with Windows 7.
Power – Rechargeable battery and charger.

The Contractor is responsible for service and repairs to all provided computer hardware. All repairs must be performed with-in 48 hours. If the repairs require more than a 48 hours then a replacement must be provided. All supplies, paper and maintenance for the computers equipment, printers, copiers, scanners, and fax machines shall be provided by the Contractor.

First Aid Kit: The Contractor shall supply a first aid kit adequate for the number of personnel expected based on the size of the field office specified and shall keep the first aid kit stocked for the duration that the field office is in service.

Rain Gauge: The Contractor shall supply, install, and maintain a rain gauge for the duration of the project, meeting these minimum requirements. The rain gauge shall be installed on top of a post such that the opening of the rain gauge is above the top of the post an adequate distance to avoid splashing of rain water from the top of the post into the rain gauge. The location of the rain gauge and post shall be approved by the Engineer. The rain gauge shall be made of a durable material and have graduations of 0.1 inches or less with a minimum total column height of 5 inches. If the gauge is damaged the Contractor shall replace it prior to the next forecasted storm event at no additional cost.

Concrete Testing Equipment: If the Contract includes items that require compressive strength cylinders for concrete, in accordance with the Schedule of Minimum Testing Requirements for Sampling Materials for Test, the Contractor shall provide the following equipment. All testing equipment will remain the property of the Contractor at the completion of the project.

- A) Concrete Cylinder Curing Box – meeting the requirements of Section 6.12 of the Standard Specifications.
- B) Air Meter – The air meter provided shall be in good working order and meet the requirements of AASHTO T 152.
- C) Slump Cone Mold – Slump cone, base plate, and tamping rod shall be provided in like-new condition and meet the requirements of AASHTO T119, Standard Test Method for Slump of Hydraulic-Cement Concrete.

Insurance Policy: The Contractor shall provide a separate insurance policy, with no deductible, in the minimum amount of five thousand dollars (\$5,000) in order to insure all Town /Consultant owned data/computer equipment and supplies used in the office against all losses. The Contractor shall be named insured on that policy, and the Town and Consultant shall be an additional named insured on the policy. These losses shall include, but not be limited to: theft, fire, and physical damage. The Town/Consultant will be responsible for all maintenance costs of Town/Consultant owned computer hardware. In the event of loss, the Contractor shall provide replacement equipment in accordance with current Department equipment specifications, within seven days of notice of the loss. If the Contractor is unable to provide the required replacement equipment within

seven days, the Town may provide replacement equipment and deduct the cost of the equipment from monies due or which may become due the Contractor under the Contract or under any other contract. The Contractor's financial liability under this paragraph shall be limited to the amount of the insurance coverage required by this paragraph. If the cost of equipment replacement required by this paragraph should exceed the required amount of the insurance coverage, the Town will reimburse the Contractor for replacement costs exceeding the amount of the required coverage.

Maintenance: During the occupancy by the Town, the Contractor shall maintain all facilities and furnishings provided under the above requirements, and shall maintain and keep the office quarters clean through the use of weekly professional cleaning to include, but not limited to, washing & waxing floors, cleaning restrooms, removal of trash, etc. Exterior areas shall be mowed and clean of debris. A trash receptacle (dumpster) with weekly pickup (trash removal) shall be provided. Snow removal, sanding and salting of all parking, walkway, and entrance ways areas shall be accomplished during a storm if on a workday during work hours, immediately after a storm and prior to the start of a workday. If snow removal, salting and sanding are not completed by the specified time, the Town will provide the service and all costs incurred will be deducted from the next payment estimate.

Method of Measurement: The furnishing and maintenance of the construction field office will be measured for payment by the number of calendar months that the office is in place and in operation, rounded up to the nearest month.

There will not be any price adjustment due to any change in the minimum computer related hardware and software requirements.

Basis of Payment: The furnishing and maintenance of the Construction Field Office will be paid for at the Contract unit price per month for "Construction Field Office, (Type)," which price shall include all material, equipment, labor, service contracts, licenses, software, repair or replacement of hardware and software, related supplies, utility services, parking area, external illumination, trash removal, snow and ice removal, and work incidental thereto, as well as any other costs to provide requirements of this specified this specification.

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-----------------------------------|-----------------|
| Construction Field Office, (Type) | Month |

ITEM 0970006A – TRAFFIC PERSON (MUNICIPAL POLICE OFFICER)
ITEM 0970007A – TRAFFIC PERSON (UNIFORMED FLAGGER)

9.70.01—Description: Under this item the Contractor shall provide the services of Trafficpersons of the type and number, and for such periods, as the Engineer approves for the control and direction of vehicular traffic and pedestrians. Traffic persons requested solely for the contractor's operational needs will not be approved for payment.

9.70.03—Construction Method: Prior to the start of operations on the project requiring the use of Trafficpersons, a meeting will be held with the Contractor, Trafficperson agency or firm, Engineer, and State Police, if applicable, to review the Trafficperson operations, lines of responsibility, and operating guidelines which will be used on the project. A copy of the municipality's billing rates for Municipal Police Officers and vehicles, if applicable, will be provided to the Engineer prior to start of work.

On a weekly basis, the Contractor shall inform the Engineer of their scheduled operations for the following week and the number of Trafficpersons requested. The Engineer shall review this schedule and approve the type and number of Trafficpersons required. In the event of an unplanned, emergency, or short term operation, the Engineer may approve the temporary use of properly clothed persons for traffic control until such time as an authorized Trafficperson may be obtained. In no case shall this temporary use exceed 8 hours for any particular operation.

If the Contractor changes or cancels any scheduled operations without prior notice of same as required by the agency providing the Trafficpersons, and such that Trafficperson services are no longer required, the Contractor will be responsible for payment at no cost to the Department of any show-up cost for any Trafficperson not used because of the change. Exceptions, as approved by the Engineer, may be granted for adverse weather conditions and unforeseeable causes beyond the control and without the fault or negligence of the Contractor.

Trafficpersons assigned to a work site are to only take direction from the Engineer.

Trafficpersons shall wear a high visibility safety garment that complies with OSHA, MUTCD, ASTM Standards and the safety garment shall have the words "Traffic Control" clearly visible on the front and rear panels (minimum letter size 2 inches (50 millimeters)). Worn/faded safety garments that are no longer highly visible shall not be used. The Engineer shall direct the replacement of any worn/faded garment at no cost to the State.

A Trafficperson shall assist in implementing the traffic control specified in the Maintenance and Protection of Traffic contained elsewhere in these specifications or as directed by the Engineer. Any situation requiring a Trafficperson to operate in a manner contrary to the Maintenance and Protection of Traffic specification shall be authorized in writing by the Engineer.

Trafficpersons shall consist of the following types:

1. Uniformed Law Enforcement Personnel: Law enforcement personnel shall wear the high visibility safety garment provided by their law enforcement agency. If no high visibility safety garment is provided, the Contractor shall provide the law enforcement personnel with a garment meeting the requirements stated for the Uniformed Flaggers' garment.

Law Enforcement Personnel may be also be used to conduct motor vehicle enforcement operations in and around work areas as directed and approved by the Engineer.

Municipal Police Officers: Uniformed Municipal Police Officers shall be sworn Municipal Police Officers or Uniformed Constables who perform criminal law enforcement duties from the Municipality in which the project is located. Their services will also include an official Municipal Police vehicle when requested by the Engineer. Uniformed Municipal Police Officers will be used on non-limited access highways. If Uniformed Municipal Police Officers are unavailable, other Trafficpersons may be used when authorized in writing by the Engineer. Uniformed Municipal Police Officers and requested Municipal Police vehicles will be used at such locations and for such periods as the Engineer deems necessary to control traffic operations and promote increased safety to motorists through the construction sites.

2. Uniformed Flagger: Uniformed Flaggers shall be persons who have successfully completed flagger training by the American Traffic Safety Services Association (ATSSA), National Safety Council (NSC) or other programs approved by the Engineer. A copy of the Flagger's training certificate shall be provided to the Engineer before the Flagger performs any work on the project. Uniformed Flaggers shall conform to Chapter 6E, Flagger Control, in the Manual of Uniformed Traffic Control Devices (MUTCD) and shall wear high-visibility safety apparel, use a STOP/SLOW paddle that is at least 18 inches (450 millimeters) in width with letters at least 6 inches (150 millimeters) high. The paddle shall be mounted on a pole of sufficient length to be 6 feet (1.8 meters) above the ground as measured from the bottom of the sign.

Uniformed Flaggers will only be used on non-limited access highways to control traffic operations when authorized in writing by the Engineer.

9.70.04—Method of Measurement: Services of Trafficpersons will be measured for payment by the actual number of hours for each person rendering services approved by the Engineer. These services shall include, however, only such trafficpersons as are employed within the limits of construction, project right of way of the project or along detours authorized by the Engineer to assist the motoring public through the construction work zone. Services for continued use of a detour or bypass beyond the limitations approved by the Engineer, for movement of construction vehicles and equipment, or at locations where traffic is unnecessarily restricted by the Contractor's method of operation, will not be measured for payment.

Trafficpersons shall not work more than twelve hours in any one 24 hour period. In case such services are required for more than twelve hours, additional Trafficpersons shall be furnished and measured for payment. In cases where the Trafficperson is an employee on the Contractor's payroll, payment under the item "Trafficperson (Uniformed Flagger)" will be made only for those hours when the Contractor's employee is performing Trafficperson services.

Travel time will not be measured for payment for services provided by Uniformed Municipal Police Officers or Uniformed Flaggers.

Mileage fees associated with Trafficperson services will not be measured for payment.

Safety garments and STOP/SLOW paddles will not be measured for payment.

9.70.05—Basis of Payment: Trafficpersons will be paid in accordance with the schedule described herein.

There will be no direct payment for safety garments or STOP/SLOW paddles. All costs associated with furnishing safety garments and STOP/SLOW paddles shall be considered included in the general cost of the item.

1. Uniformed Law Enforcement Personnel: The sum of money shown on the Estimate and in the itemized proposal as "Estimated Cost" for this work will be considered the bid price even though payment will be made as described below. The estimated cost figure is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figures will be disregarded and the original price will be used to determine the total amount for the contract.

The Department will pay the Contractor its actual costs for "Trafficperson (Municipal Police Officer)" plus an additional 5% as reimbursement for the Contractor's administrative expense in connection with the services provided.

The invoice must include a breakdown of each officer's actual hours of work and actual rate applied. Mileage fees associated with Trafficperson services are not reimbursable expenses and are not to be included in the billing invoice. The use of a municipal police vehicle authorized by the Engineer will be paid at the actual rate charged by the municipality. Upon receipt of the invoice from the municipality, the Contractor shall forward a copy to the Engineer. The invoice will be reviewed and approved by the Engineer prior to any payments. *Eighty (80%) of the invoice will be paid upon completion of review and approval. The balance (20%) will be paid upon receipt of cancelled check or receipted invoice, as proof of payment.* The rate charged by the municipality for use of a uniformed municipal police officer and/or a municipal police vehicle shall not be greater than the rate it normally charges others for similar services.

2. Uniformed Flagger: Uniformed flaggers will be paid for at the contract unit price per hour for "Trafficperson (Uniformed Flagger)", which price shall include all compensation, insurance benefits and any other cost or liability incidental to the furnishing of the trafficpersons ordered.

| Pay Item | Pay Unit |
|--|----------|
| Trafficperson (Municipal Police Officer) | est. |
| Trafficperson (Uniformed Flagger) | Hr. |

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 described by the following and as limited in the Special Provision "Prosecution and Progress":

West Center Street

The Contractor shall maintain and protect existing traffic operations.*

Excepted therefrom will be those periods during the allowable periods when the Contractor is actively working at which time the Contractor will be permitted to reduce the roadway width to 11 foot travel lanes with 2 foot shoulder widths.

*During stage construction, existing traffic operations will be considered to be as shown on the Maintenance and Protection of Traffic Plans contained in the contract drawings.

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, 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 3-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.

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.

Signing Patterns

The Contractor shall erect and maintain all signing patterns in accordance with the traffic control plans contained herein. Proper distances between advance warning signs and proper taper lengths are mandatory.

Roadside Protective Systems

The Contractor is alerted that all hazardous areas that are exposed to traffic which have been caused by the removal of specified lengths of roadside protection due to construction operations shall be replaced by the Contractor within the same workday.

In the event that the leading end of a parapet or other obstruction is exposed by the Contractor's operations the contractor shall protect said obstruction from live traffic utilizing a Type A Impact Attenuation System as detailed on the plans or other method of protection as approved by the Engineer.

Where permanent or temporary precast concrete barrier curb is installed for the protection of traffic from a hazardous area, the terminal end facing approaching traffic within 30' of a travel lane shall be protected with a Type A Impact Attenuation System as shown on the plans or as directed by the Engineer. These units will be paid for at the contract unit price for the item involved.

Pavement Markings

During construction, the Contractor shall maintain all pavement markings on paved surfaces on all roadways throughout the limits of the project.

Interim Pavement Markings

The Contractor shall install painted pavement markings, which shall include centerlines and shoulder edge lines, on each intermediate course of bituminous concrete pavement and on any milled surface by the end of the work day/night. If the next course of bituminous concrete pavement will be placed within seven days, shoulder edge lines are not required. The painted pavement markings will be paid under the appropriate items.

If the Contractor will install another course of bituminous concrete pavement within 24 hours, the Contractor may install Temporary Plastic Pavement Marking Tape in place of the painted pavement markings by the end of the work day/night. These temporary pavement markings shall include centerlines; shoulder edge lines are not required. Centerlines shall consist of two 4 inch wide yellow markings, 2 feet in length, side by side, 4 to 6 inches apart, at 40-foot intervals. No passing zones should be posted with signs in those areas where the final centerlines have not been established on two-way roadways. The Contractor shall remove and dispose of the Temporary Plastic Pavement Marking Tape when another course of bituminous concrete pavement is installed. The cost of furnishing, installing and removing the Temporary Plastic Pavement Marking Tape shall be at the Contractor's expense.

Final Pavement Markings

The Contractor should install painted pavement markings on the final course of bituminous concrete pavement by the end of the work day/night. If the painted pavement markings are not installed by the end of the work day/night, then Temporary Plastic Pavement Marking Tape shall be installed as described above and the painted pavement markings shall be installed by the end of the work day/night on Friday of that week.

If Temporary Plastic Pavement Marking Tape is installed, the Contractor shall remove and dispose of these markings when the painted pavement markings are installed. The cost of furnishing, installing and removing the Temporary Plastic Pavement Marking Tape shall be at the Contractor's expense.

The Contractor shall install permanent Epoxy Resin Pavement Markings in accordance with Section 12.10 entitled "Epoxy Resin Pavement Markings, Symbols, and Legends" after such time as determined by the Engineer.

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 13 through 16 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 |

SECTION 1. WORK ZONE SAFETY MEETINGS

- 1.a) Prior to the commencement of work, a work zone safety meeting will be conducted with representatives of the Town, Municipal Police, the Contractor (Project Superintendent) and the Traffic Control Subcontractor (if different than the prime Contractor) to review the traffic operations, lines of responsibility, and operating guidelines which will be used on the

project. Other work zone safety meetings during the course of the project should be scheduled as needed.

- 1.b) A Work Zone Safety Meeting Agenda shall be developed and used at the meeting to outline the anticipated traffic control issues during the construction of this project. Any issues that can't be resolved at these meetings will be brought to the attention of the Town Engineer and Director of Public Works. The agenda should include:
- Review Project scope of work and time
 - Review Section 1.08, Prosecution and Progress
 - Review Section 9.70, Trafficpersons
 - Review Section 9.71, Maintenance and Protection of Traffic
 - Review Contractor's schedule and method of operations.
 - Review areas of special concern.
 - Open discussion of work zone questions and issues
 - Discussion of review and approval process for changes in contract requirements as they relate to work zone areas

SECTION 2. GENERAL

- 2.a) If the required minimum number of signs and equipment are not available; the traffic control pattern shall not be installed.
- 2.b) The Contractor shall have back-up equipment (Changeable Message Sign, construction signs, cones/drums, etc.) available at all times in case of mechanical failures, etc. The only exception to this is in the case of sudden equipment breakdowns in which the pattern may be installed but the Contractor must provide replacement equipment within 24 hours.
- 2.c) Failure of the Contractor to have the required minimum number of signs, personnel and equipment, which results in the pattern not being installed, shall not be a reason for a time extension or claim for loss time.
- 2.d) In cases of legitimate differences of opinion between the Contractor and the Inspection staff, the Inspection staff shall err on the side of safety. The matter shall be brought to the Town Engineer for resolution immediately or, in the case of work after regular business hours, on the next business day.

SECTION 3. INSTALLING AND REMOVING TRAFFIC CONTROL PATTERNS

- 3.a) Lane Closures shall be installed beginning with the advanced warning signs and proceeding forward toward the work area.
- 3.b) Lane Closures shall be removed in the reverse order, beginning at the work area, or end of the traffic control pattern, and proceeding back toward the advanced warning signs.

- 3.c) Stopping traffic may be allowed:
- As per the contract for such activities as steel erection, etc.
 - During paving, milling operations, etc. where, in the middle of the operation, it is necessary to flip the pattern to complete the operation on the other half of the roadway and traffic should not travel across the longitudinal joint or difference in roadway elevation.
 - To move slow moving equipment across live traffic lanes into the work area.
- 3.d) The Contractor must adhere to using the proper signs, placing the signs correctly, and ensuring the proper spacing of signs.
- 3.e) Prior to installing a pattern, any conflicting existing signs shall be covered with an opaque material. Once the pattern is removed, the existing signs shall be uncovered.

SECTION 4. USE OF TRAFFIC DRUMS AND TRAFFIC CONES

- 4.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.
- 4.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.
- 4.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.
- 4.d) Typical spacing of traffic drums and/or cones shown on the Traffic Control Plans in the Contract are maximum spacing and may be reduced to meet actual field conditions as required.

SECTION 5. WORK ZONE SIGNS AND TRAFFIC CONTROL PLANS

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

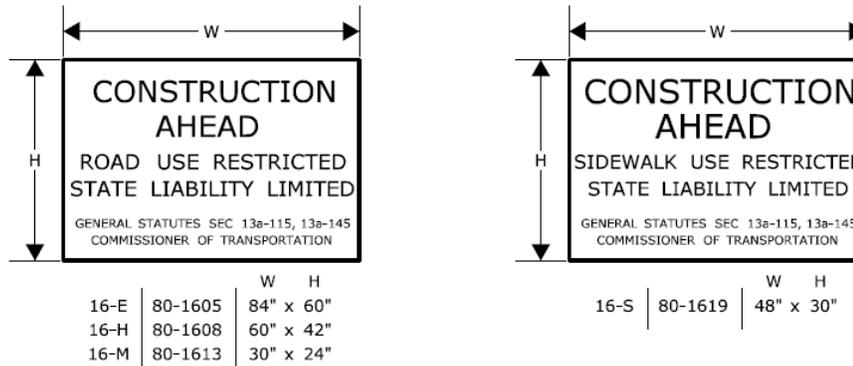
NOTES

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED


 Charles S. Harlow
 2012.06.05 15:50:35-0400
 PRINCIPAL ENGINEER

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.

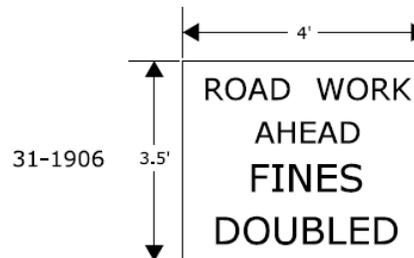
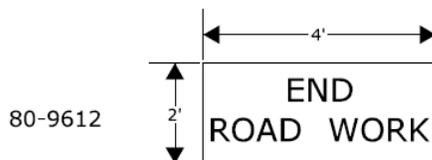
REGULATORY SIGN "ROAD WORK AHEAD, FINES DOUBLED"

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

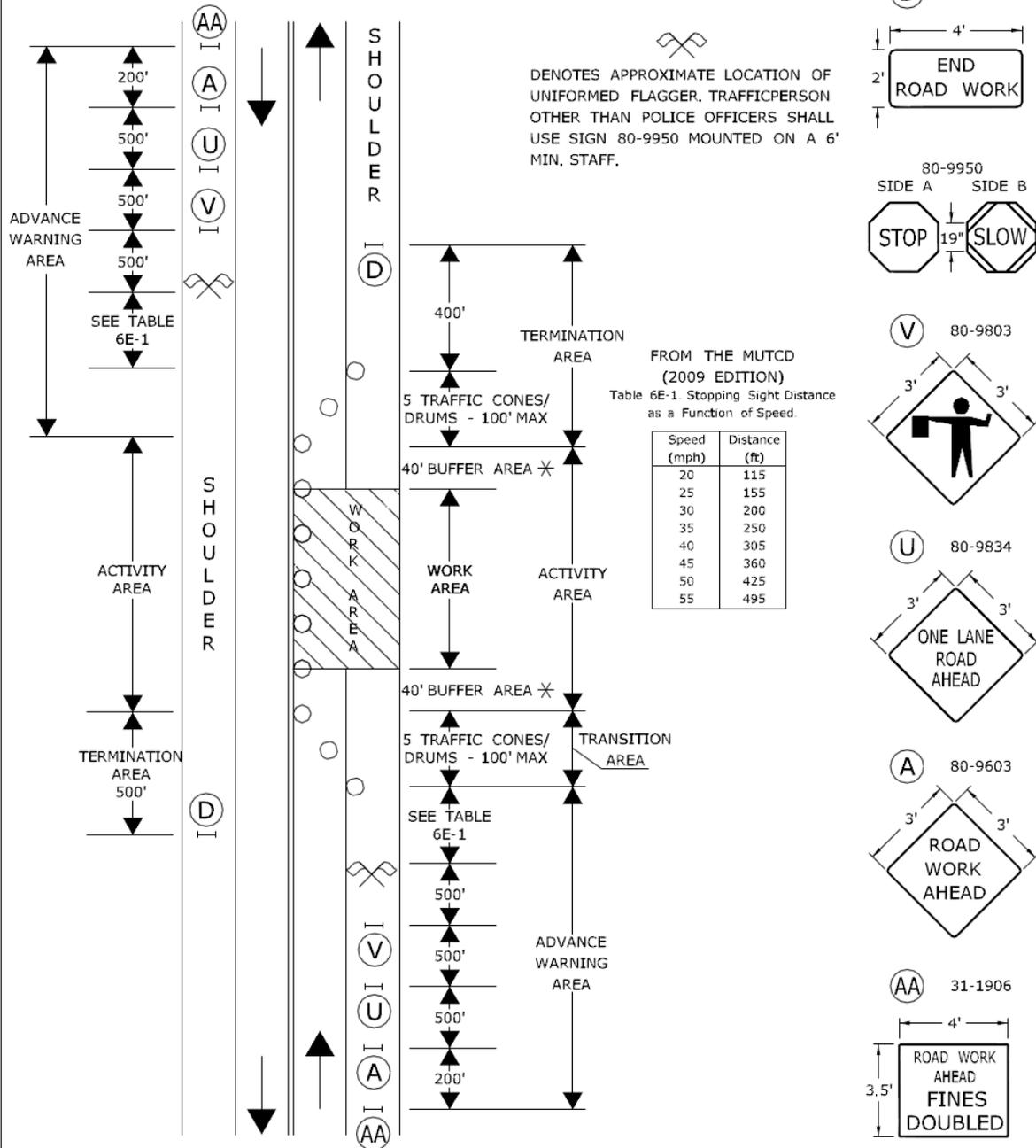
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BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED

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PRINCIPAL ENGINEER

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 *Charles S. Harlow* Charles S. Harlow
2012.06.05 15:56:23-04'00'
PRINCIPAL ENGINEER

WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE
108 SQ. FT (MIN.)

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.



B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FLAGGER SHALL MOTION WITH THE FREE HAND FOR ROAD USERS TO PROCEED.



C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.



- TRAFFIC CONE **OR** TRAFFIC DRUM
- * OPTIONAL ⊗ TRAFFIC DRUM ⇨ PORTABLE SIGN SUPPORT
- ◀ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

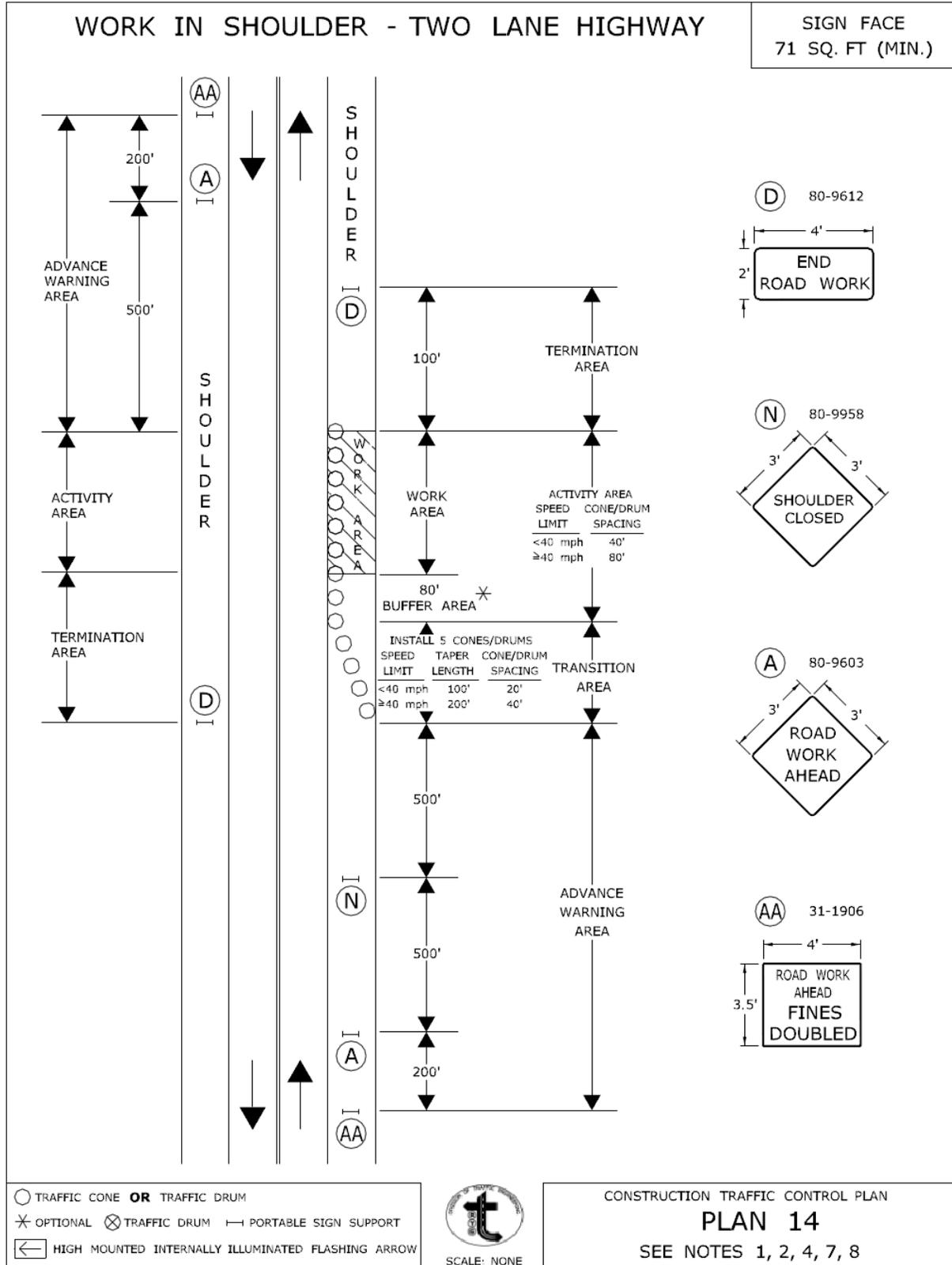


SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

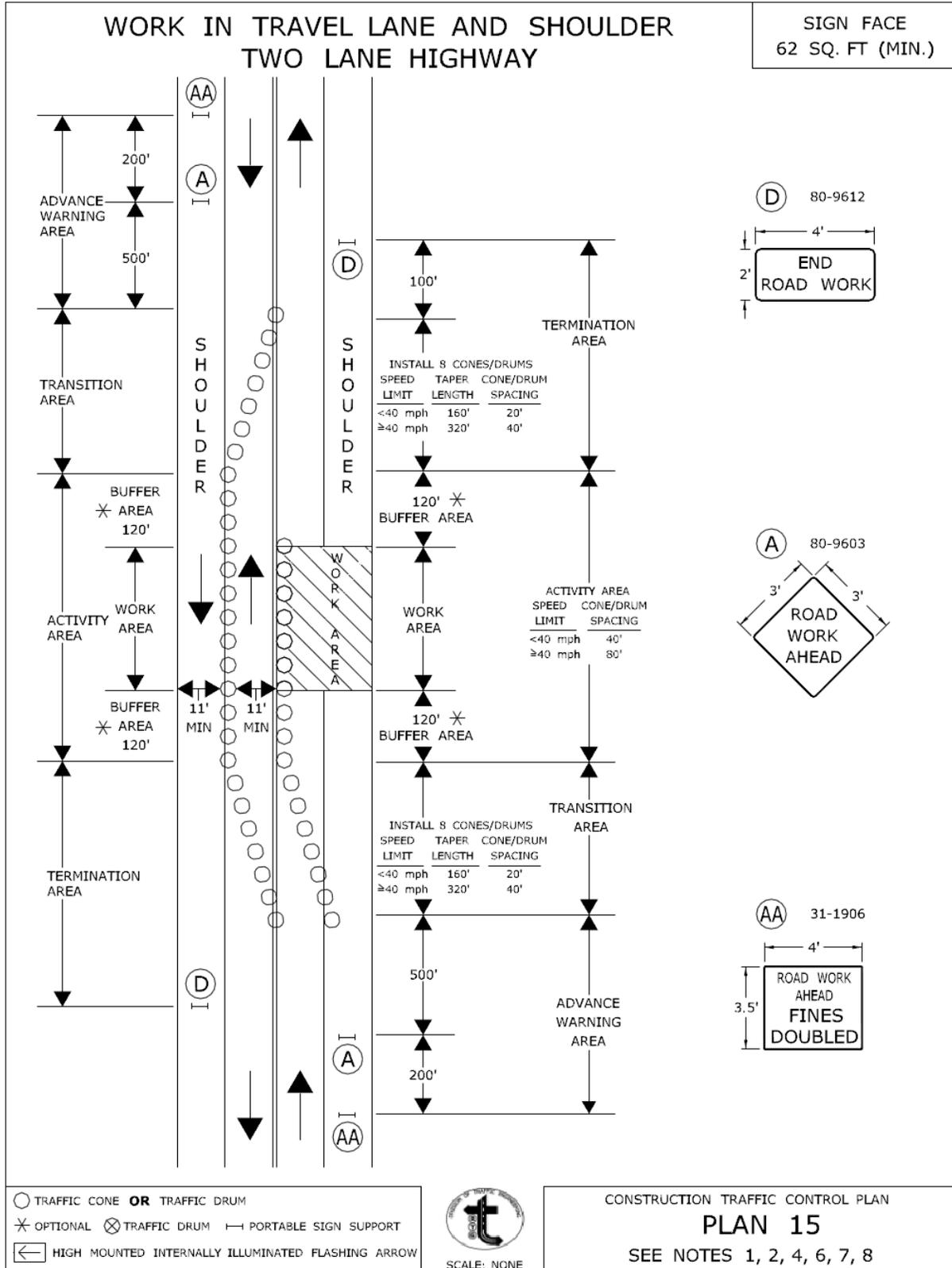
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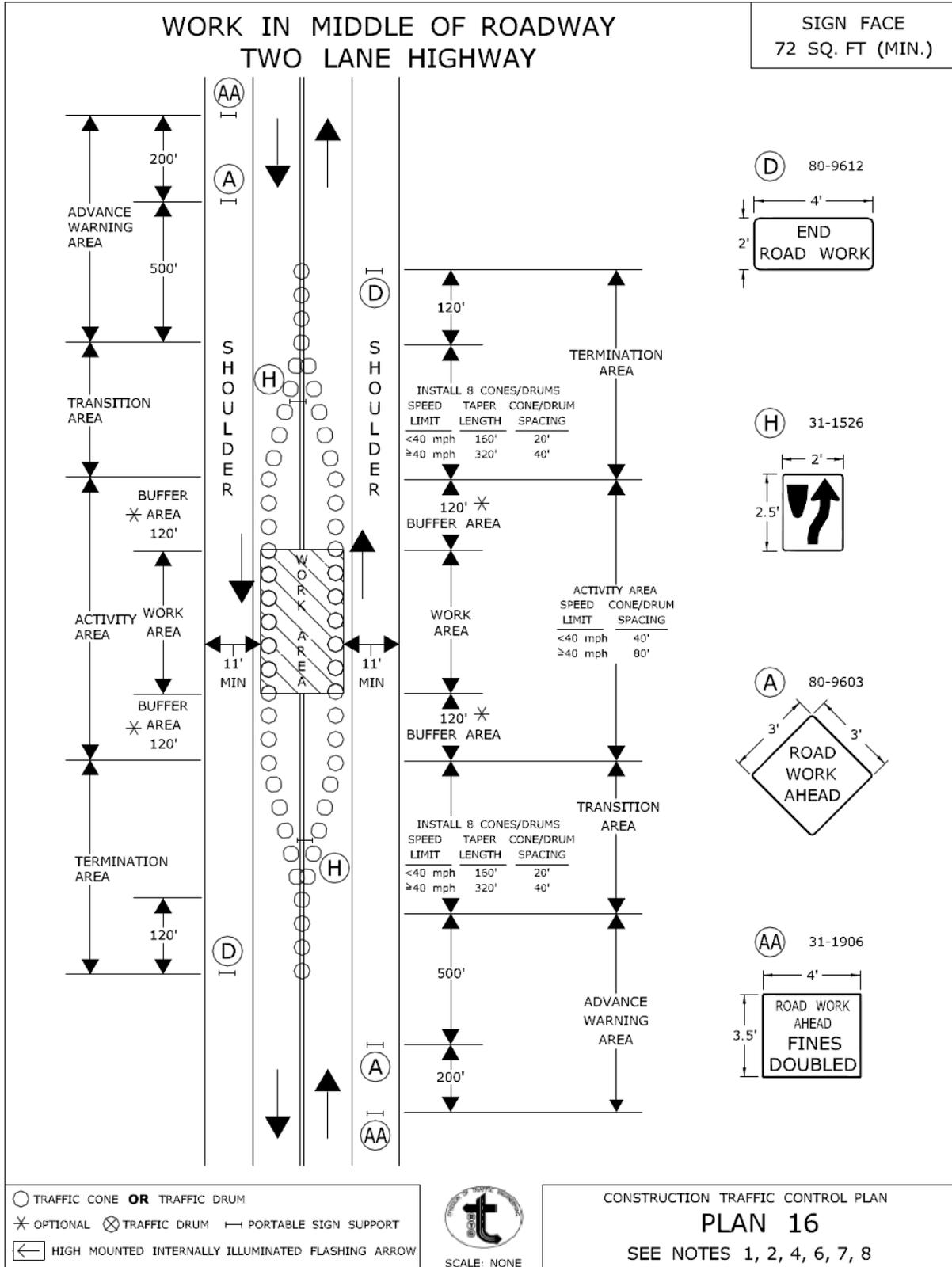
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BUREAU OF ENGINEERING & CONSTRUCTION

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 PRINCIPAL ENGINEER

Article 9.71.05 – Basis of Payment is supplemented by the following:

The temporary relocation of signs and supports, and the furnishing, installation and removal of any temporary supports shall be paid for under the item “Maintenance and Protection of Traffic”. Temporary overhead sign supports and foundations shall be paid for under the appropriate item(s).

The cost of furnishing, installing, and removing the material for the 4H:1V traversable slope shall be paid for under the item “Maintenance and Protection of Traffic.”

ITEM #0974001A - REMOVAL OF EXISTING MASONRY

Work under this item shall conform to the requirements of Section 9.74 amended as follows:

9.74.03 - Construction Methods: Add the following:

The concrete shall be saw cut to delineate the removal limits. Pneumatic hammers or any other method approved by the Engineer may be used to remove the concrete. Maximum 30 lb hammers shall be used near reinforcing steel that is to remain. Pneumatic tools shall not be placed in direct contact with the reinforcing steel that is to remain.

Reinforcing steel shall be cut and removed as shown on the plans. Loose and small concrete fragments shall be cleaned from the reinforcing steel required to be left in place.

The Contractor shall take necessary precautions to prevent any damage to the portions of the structure to remain. The Contractor, as directed by the Engineer, and at no cost to the Town shall repair any damage.

When removing the concrete and reinforcing steel, the Contractor shall take necessary precautions to prevent debris from dropping to areas below the structure, into the stream, or onto adjacent traffic lanes.

9.74.04 – Method of Measurement: Add the following:

Saw cutting of concrete will not be measured for payment, but shall be considered incidental to the item “Removal of Existing Masonry”.

ITEM NO. 1118051A – TEMPORARY SIGNALIZATION (SITE NO. 1)

Description:

Provide Temporary Signalization (TS) at the intersections shown on the plans or as directed by the Engineer.

Materials:

- Pertinent articles of the Standard Specifications
- Supplemental Specifications and Special Provisions contained in this contract

Construction Methods:

TS Plan

At least 30 days prior to implementation of each stage, submit a 1:40 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. 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, and maintain signal-related signing (lane-use, signal ahead, 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 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 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.

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:

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 Stage 1 Construction is implemented and West Center Street is open to alternating one-way signal controlled traffic.

TS terminates when Stage 1 Construction is complete and West Center Street is open to Stage 2 traffic and two directional traffic.

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 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.)” for each site. This price includes the preliminary inspection, TS plan for each stage/phase, furnishing, installing, maintaining, 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 Contractor supplied items that will remain the Contractor’s property shall be included in the contract Lump Sum price for “Temporary Signalization.”

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--------------------------------------|-----------------|
| Temporary Signalization (Site No. 1) | L.S. |

ITEM #1301765A – FURNISHING AND INSTALLING 12” WATER MAIN

ITEM #1301768A – FURNISHING AND INSTALLING 12” WATER MAIN ON BRIDGE

Description: The Contractor shall furnish and install ductile iron pipe, of the sizes and types indicated, and all the fittings and appurtenances to the lines and grades shown on the Contract Drawings, complete as shown, specified or directed, including but not limited to; pipe, bends, restraint devices, air release valves, gate valves, valve boxes, disinfection and testing fittings, thrust anchors, insulation, transporting materials, digging test pits, the clearing, trenching, disposing of unused excavated materials, removing and disposing of sections of the present water mains and concrete anchors, furnishing, installing and field testing the pipelines complete with pipe restraints, concrete anchor blocks and utility identification tape, all trenching, rock removal, refilling trenches, filter fabric, furnishing additional material for refilling, trench compaction/testing, temporary surface restoration, miscellaneous grading, trench support, bracing, pumping and all incidental work where required, to the specifications and details of the Southington Water Department, except as otherwise herein provided for.

| ITEM | UNIT MEASUREMENT | APPROXIMATE QUANTITY FOR LUMP SUM PRICE |
|--|------------------|---|
| 12” DUCTILE IRON WATER MAIN | LF | 65 |
| 12” DUCTILE IRON WATER MAIN ON BRIDGE | LF | 65 |
| THRUST ANCHORS | EA | 2 |
| 12” GATE VALVES | EA | 2 |
| 22-1/2 DEGREE BENDS | EA | 4 |
| 11-1/4 DEGREE BENDS | EA | 1 |
| 2” WEDGE AIR RELEASE VALVE | EA | 1 |
| 1” CORPORATION STOP FOR TESTING AND DISINFECTION | EA | 2 |
| 12” SPLIT PUSH-ON JOINT RESTRAINT HARNESSSES | EA | 3 |
| REMOVE EXISTING VALVE | EA | 1 |
| TEMPORARY PAVEMENT REPAIRS | SY | 40 |
| ADDITIONAL BACKFILL MATERIAL (WATER MAIN) | CY | 10 |
| EXCAVATION AND DISPOSAL OF UNSUITABLE MATERIALS (WATER MAIN) | CY | 5 |

The above quantities are for information only and not to be considered as the actual for development of the cost.

Reference to “SWD” in this special provision refers to “Southington Water Department”.

Materials: All materials used shall be from manufacturers and models approved by the SWD. All materials must be manufactured in the United States of America and purchased directly from a water works supply company.

Unrestrained Ductile Iron Pipe:

1. Allowable manufacturers: McWane Ductile, U.S Pipe Company. Only one brand of pipe will be allowed under this contract.
2. Pipe Characteristics: Conform to ANSI/AWWA C151/A 21.51, thickness class 52, 18-foot lengths.
3. Comply with NSF/.ANSI 61, Drinking Water System Components – Health Effects.
4. Coatings and Linings: Exterior to be asphalt coated in accordance with ANSI/AWWA C151/A21.51, Section 4.3.1. Interior lining to be double thickness cement-mortar conforming to ANSI/AWWA C104/A21.4.
5. Joints: Push-on conforming to ANSI/AWWA C111/A21.11 with two bronze wedges per joint.
6. Gaskets: Styrene butadiene rubber (SBR) conforming to ANSI/AWWA C111/A21.11.
7. Joint lubricants shall be compatible with the gasket materials and be ANSI/NSF 61 compliant.
8. Provide affidavits of compliance with the requirements of ANSI/AWWA C104/A21.4, ANSI/AWWA C111/A21.11, and ANSI/AWWA C151/A21.51.

Restrained Ductile Iron Pipe:

1. Allowable manufacturers: McWane Ductile, U.S Pipe Company. Only one brand of pipe will be allowed under this contract.
2. Pipe Characteristics: Conform to ANSI/AWWA C151/A 21.51, thickness class 54, 18-foot lengths.
3. Comply with NSF/.ANSI 61, Drinking Water System Components – Health Effects.
4. Coatings and Linings: Exterior to be asphalt coated in accordance with ANSI/AWWA C151/A21.51, Section 4.3.1. Interior lining to be double thickness cement-mortar conforming to ANSI/AWWA C104/A21.4.
5. Joints: Restrained TR-Flex push-on joint conforming to ANSI/AWWA C111/A21.11 with two bronze wedges per joint.
6. Gaskets: Styrene butadiene rubber (SBR) conforming to ANSI/AWWA C111/A21.11.
7. Joint lubricants shall be compatible with the gasket materials and be ANSI/NSF 61 compliant.
8. Provide affidavits of compliance with the requirements of ANSI/AWWA C104/A21.4, ANSI/AWWA C111/A21.11, and ANSI/AWWA C151/A21.51.

Pre-insulated Restrained Joint Ductile Iron Pipe

1. Acceptable manufacturers: Urecon Limited or Engineer approved equivalent.
2. Restrained Joint Ductile Iron Pipe: Conform to the requirements listed above.
3. Ductile Iron Fittings: Conform to the requirements listed above.
4. Insulation: Factory applied pipe insulation shall be rigid polyurethane foam with the following characteristics:
 - a. Minimum thickness: 2-inches (50 mm).

- b. Density: 2.2 to 3.0 lbs/ft³ (35 to 46 kg/m³) as determined in accordance with ASTM D1622.
 - c. Minimum Closed Cell Content: 90% as determined in accordance with ASTM D6226.
 - d. Maximum Water Absorption: 4.0% by volume as determined in accordance with ASTM C272.
 - e. Thermal Conductivity: 0.14 to 0.17 Btu/in/ft²/hr/degree Fahrenheit (0.020 to 0.026 W/m/degree Celsius) as determined in accordance with ASTM C518.
5. Outer Insulation Jacketing: Minimum 16 gage spirally wrapped galvanized steel.
 6. Insulated pipe joints shall be completed using prefabricated polyisocyanurate or urethane foam half shells and metal consistent with that on the factory insulated pipe. All metal overlaps at the joints and fittings shall be 2-inches (50 mm) minimum and shall be field positioned in such a way as to shed water.
 7. Insulation kits for fittings shall consist of rigid polyisocyanurate or urethane foam insulation complete with a thin elastomeric coating on the outside surfaces for strength during transit and installation, and fabricated galvanized steel or aluminum outer protective jacket consistent with that on the factory insulated pipe. All kits to be supplied complete with stainless steel bands, stainless steel band-it clips, and stainless steel screws to suit. Fitting insulation shall conform to the following requirements:
 - a. Density (ASTM D1622) 27 to 32 kg/m³ (1.7 to 2.0 lbs/ft³).
 - b. Compressive strength (ASTM D1621) 131 to 158 kPa (19 to 23 lbs/in²) .
 - c. Minimum Closed Cell Content: 90% as determined in accordance with ASTM D6226.
 - d. Maximum Water Absorption: 4.0% by volume as determined in accordance with ASTM D2842.
 - e. K Factor: 0.19 Btu/in/ft²/hr/degree Fahrenheit (0.027 W/m/degree Celsius) as determined in accordance with ASTM C518.
 - f. Thickness to match pipe insulation thickness.
 8. Provide roller protection saddles at pipe support roller locations as an integral part of the pre-insulated piping system.

Ductile Iron Fittings:

1. Conform to ANSI/AWWA C153/A21.53.
2. Comply with NSF/.ANSI 61, Drinking Water System Components – Health Effects
3. Fitting joints shall be mechanical joints conforming to ANSI/AWWA C111/A21.11. Unrestrained mechanical joint glands, if used, shall be ductile iron. Grey-iron glands are not acceptable.
4. Coatings and Linings: Exterior to be asphaltic coated in accordance with ANSI/AWWA C153/A21.53, Section 4.4.2. Interior lining to be double thickness cement-mortar conforming to ANSI/AWWA C104/A21.4
5. Gaskets: Styrene butadiene rubber (SBR) conforming to ANSI/AWWA C111/A21.11.
6. Joint lubricants shall be compatible with the gasket materials and be ANSI/NSF 61 compliant.

7. Bolts and Nuts: Conform to the requirements of ANSI/AWWA C111/A21.11, Section 4.4.5 with minimum 1.2 mil thick blue, resin-bonded, thermally cured, fluoropolymer coating.
8. Provide affidavits of compliance with the requirements of ANSI/AWWA C104/A21.4, ANSI/AWWA C111/A21.11, and ANSI/AWWA C153/A21.53.

Restrained Mechanical Joint Glands:

1. Megalug Series 1100 as manufactured by EBAA Iron, Inc.
2. Minimum rated water working pressure – 350 psi.
3. Bolts and Nuts: Conform to the requirements of ANSI/AWWA C111/A21.11, Section 4.4.5 with minimum 1.2 mil thick blue, resin-bonded, thermally cured, fluoropolymer coating.

Push-on Pipe Joint Restraint Harnesses:

1. Megalug Series 1700 as manufactured by EBAA Iron, Inc.
2. Provide split ring design version if required for installation on existing ductile iron pipe.
3. Minimum rated water working pressure – 350 psi.
4. Tie rods and hardware shall be manufactured from Type 316 stainless steel.

Resilient Seat Gate Valves:

1. Conform to the requirements of ANSI/AWWA C509 or ANSI/AWWA C515.
2. Comply with NSF/.ANSI 61, Drinking Water System Components – Health Effects
3. Acceptable manufacturers: Kennedy Valve, American Flow Control/American Darling, Mueller.
4. Valves shall be NRS with 2-inch wrench nut operator opening to the right (clockwise).
5. Valve body and bonnet shall be ductile iron.
6. Valve bolting hardware shall be type 316 stainless steel with hexagonal heads. No metric hardware shall be allowed.
7. Valves shall have O-ring stem seals replaceable under pressure.
8. Valve ends shall be mechanical joints conforming to ANSI/AWWA C111/A21.11. Unrestrained mechanical joint glands, if used, shall be ductile iron. Grey-iron glands are not acceptable.
9. Coatings and Linings: Interior and exterior coatings to be fusion bonded epoxy conforming to ANSI/AWWA C550.
10. Gaskets: Styrene butadiene rubber (SBR) conforming to ANSI/AWWA C111/A21.11.
11. Joint lubricants shall be compatible with the gasket materials and be ANSI/NSF 61 compliant.
12. Mechanical Joint Bolts and Nuts: Conform to the requirements of ANSI/AWWA C111/A21.11, Section 4.4.5 with minimum 1.2 mil thick blue, resin-bonded, thermally cured, fluoropolymer coating.
13. Provide affidavits of compliance with the requirements of ANSI/AWWA C111/A21.11, ANSI/AWWA C550, and ANSI/AWWA C509 or ANSI/AWWA C515..

Valve Boxes:

1. Acceptable Manufacturers: Bingham & Taylor, Bibby Ste. Croix, East Jordan Iron Works.
2. Material: Cast iron conforming to ASTM A48, minimum Class 35, and coated with a water based bituminous coating.
3. Three piece adjustable sliding type with 8-inch minimum diameter base section, 5-1/4-inch minimum shaft diameter and cast iron cover. Minimum 3/16-inch wall thickness.
4. Valve box cover to be marked with the word "WATER" cast into the cover.

Utility Identification Tape:

1. Width: 2-inches
2. Minimum Thickness: 5 mils
3. Type: Magnetically detectable polyester
4. Color and Labeling: Blue with black text "CAUTION BURIED WATER LINE BELOW".
5. Comply with OSHA regulation 1926.956(c)(1).

Manual Air Release Valves:

1. Acceptable Manufacturer: Wedge Manufacturing, Bethlehem, CT
2. Manufactured from lead free brass or bronze materials. Products shall be certified to the requirements of NSF/ANSI 61, Annex F and G, and NSF/ANSI 372.
3. Valve boxes for use with air release valves shall conform to the requirements above.

Restraints and Harnessing

1. Eyebolts and lacing rods shall be of A-36 steel as manufactured by Star National Products, or approved equal. All components shall be hot-dipped galvanized.

Concrete for Thrust Blocks and Anchors

1. Class "C" concrete, conforming the requirements of Form 817, Article M.03.

Pipe and Fitting Bedding

1. Sand conforming to the requirements of Form 817, Article M.03.01, 2. Fine Aggregate.

Trench Backfill

1. Native material consisting of granular soil excavated from on-site sources of such a nature that they will form a stable dense backfill. Materials shall not contain stones larger than 6-inches in any dimension, vegetation, masses of roots, individual roots more than 12-feet long or more than 1/2-inch in diameter, trash, clays, or plastic fines. Organic matter shall not exceed two percent (2%). Non-plastic fines (silts) shall not exceed 20 percent (20%).

Construction Methods:

Preparation: Prior to pipe-laying, the Contractor shall dig test pits where the new pipe connects to the present water main to ascertain the location, elevation and cross sectional dimensions of the present mains.

Existing Valve Operation: Under no circumstances shall the contractor operate any existing valves. All valve operations are to be performed by the SWD.

Transporting and Distributing Pipe: The Contractor shall transport the pipe and fittings from the place of manufacture, shall secure all permits which may be necessary, and comply with the requirements of the Connecticut Bureau of Highways, Cities and Towns, concerning heavy transporting over State, City and Town highways.

During loading, transportation and unloading, more than ordinary care shall be taken to prevent injury to the pipes. Such work shall be done with each section of the pipe under full control at all times and under no condition shall a pipe be dropped on the ground. Pipes shall be placed on sand beds or other methods may be employed to avoid chances of pipe being frozen to the ground surface.

In distributing the pipe in the field, as permitted, each piece shall be placed as near as possible to the point where it is to be installed and faced in the proper direction. In case any pipe received damage from handling or other cause and made unacceptable to the Engineer, it shall be replaced with a new pipe at the expense of the Contractor. The Contractor is cautioned that State, City, or Town authorities may not permit storing pipe, etc., within street or highway limits.

Trenching: Prior to any excavation, the Contractor shall notify all affected utilities in accord with Public Act 77-350 (CALL BEFORE YOU DIG 1-800-922-4455).

The trench for the pipe shall be 18-inches beyond the outside of the barrel of the pipe on each side, the top of the barrel of the pipe shall be as shown on the Contract Drawings or as directed by the Engineer; and the bottom of the trench shall be below the bottom of the pipe. The Contractor alone shall be responsible for the stability and safety of the trenches and adjacent structures, and shall use such trench support and bracing as necessary without additional payment therefor. Pavement cuts shall be made with the edges reasonably smooth and without cracking or damage to the pavement outside the limits of the portion excavated. The methods used and the location of such cuts shall conform to the requirements and specifications of the Town or State. Repairs to pavement shall be made in accordance with the requirements and specifications of the Town or State.

In any area to receive fill, no pipe trench shall be excavated until the fill has been placed and compacted to a level at least 3-feet above the top of the pipe to be installed.

The Contractor may be required to excavate locally to determine the location and depth of existing underground structures on the lines of the pipe well in advance of the pipe laying. There will be no additional payment for this work, including backfilling and temporary surfacing.

Excavation Support, Bracing and Pumping: The Contractor shall furnish and put in place such excavation support and bracing as may be necessary, to support the sides of the excavation, to prevent undermining of the pavement or to protect from possible injury any pipes, sewers, ducts, poles, conduits or other structures existing in the streets, or highways, and shall remove such excavation supports and bracing as the trench is refilled unless the Engineer shall order it left in place.

The Contractor shall maintain all excavations in proper condition for carrying on the work, and to this end shall do all bailing, draining, or pumping which may be necessary to keep the trenches or other excavations free of water. No direct payment will be made for this work but the cost thereof will be considered as having been included in the price bid per linear feet of pipe.

If the Contractor installs and operates wellpoints on any section of the work, the expense of the same shall be borne by the Contractor.

Protection of Pipes, Drains, Culverts, etc.: All existing gas pipes, water pipes, sewers, drains, manholes, catch basins, culverts, electrical conduits, telephone ducts, utility poles or other structures which are uncovered by the excavation, and which do not, in the opinion of the Engineer, require to be changed in location, shall be carefully supported and protected from injury by the Contractor; and in case of damage, they shall be restored by him without compensation; therefore, to as good condition as that in which they were found and shall be kept in repair during the existence of this Contract.

Laying Ductile Iron Pipe: Proper and suitable tools and appliances for safe and convenient handling and laying of pipe shall be used, and care shall be taken to prevent the coating of the pipe from being damaged, particularly on the inside of the pipes. The Contractor shall not start any pipe work until he has satisfied the Engineer that he has on hand and available the following minimum equipment:

1. Wheel pipe cutters, hydraulic pipe cutter or a pipe saw for the sizes of pipe to be laid;
2. Ratchet type socket wrenches for mechanical joint bolts and nuts;
3. At least two expandable pipe stops of the proper size for closing the end of the pipe being laid when not actually laying pipe.

All pipes shall be carefully examined for defects and no pipe or other casting shall be laid which is known to be defective, and should any defective pipe or other casting be discovered after being laid, it shall be removed and replaced with a sound casting at the expense of the Contractor.

Pipe located on the bridges shall be carefully cut to length and carefully installed to insure proper positioning of joints between pipe support assemblies.

The pipe shall be laid upon sound bedding, cut true and even so that the barrel of the pipe will have a bearing for its full length. In the event the trench is excavated below the grade of the bottom of the pipe, the trench will be brought up to grade with acceptable crushed stone or processed gravel, compacted, at the expense of the Contractor, before the pipe is laid.

The utility identification tape shall be placed as indicated on the drawings.

When not actually laying pipe (e.g. overnight, weekends, holidays, etc.) the open ends of the pipe shall be kept plugged with approved watertight night caps furnished by the Contractor.

The Contractor shall take all necessary precautions to prevent water from entering the pipe during installation of the pipeline.

Unless shown otherwise on the Contract Drawings or directed otherwise by the Engineer, the pipeline shall be installed a minimum of five (5) feet below finished grade. The pipeline shall also be installed to provide at least eighteen (18) inches of vertical clearance between the water pipe and storm drains or sanitary sewers.

Cutting Pipe: Whenever the pipes require cutting, an approved saw, wheel, or hydraulic type cutter shall be used. This work shall be done by the Contractor without extra compensation, in a manner satisfactory to the Engineer, and only experienced men shall be engaged thereon.

Joints: On pipe with rubber gasket push-on joints, the gasket shall be installed in the socket of the pipe previously laid and the gasket then lubricated. The plain end of the pipe being laid shall then be inserted and pulled or pushed to the full depth of the socket. An approved jack-type tool shall be used to assemble pipe 10-inches in diameter and larger. Plain ends of cut pipe shall be filed or ground to a taper to prevent damage to the gasket during insertion.

On fittings, butterfly and gate valves with mechanical joints, the follower ring and rubber gaskets shall be placed on the plain end of the pipe being (or previously) laid and entered into the socket of the fitting. The gasket shall then be evenly seated in the socket, the follower ring moved up to the face of the gasket and the "T" bolts inserted and made finger tight. The "T" bolts shall then be tightened with a ratchet or torque wrench to the range of torque as recommended by the gland manufacturer.

Joint Restraints: Where and as shown on the Contract Drawings, or as directed by the Engineer, retaining glands or eye bolts and lacing rods shall be installed with the standard lacing details shown for mechanical joint pipe or fittings.

The retaining glands shall be installed in lieu of the standard mechanical joint gland. The "T" bolts shall be tightened with a ratchet or torque wrench to the range of torque as recommended

by the gland manufacturer. Only then shall the set screws be tightened to the range of torque as recommended by the gland manufacturer, tightening 180 degrees apart and making a final check with the wrench to ascertain that all set screws have the proper torque. The joint is then complete.

Other special lacing or harnessing, if shown on the Contract Drawings, or directed by the Engineer shall be installed by the Contractor to the satisfaction of the Engineer.

Refilling Trenches: As soon as practicable after the pipes have been laid, the trenches shall be refilled at least to a level 1-foot above the top of the pipe with sand bedding, deposited in layers no more than 6-inches in depth and satisfactorily compacted, each layer to be leveled and thoroughly compacted to the satisfaction of the Engineer before the next layer is deposited. There will be no additional payment for necessary borrow to refill to this level. Special care shall be taken to consolidate the bedding under the pipes and the whole work of refilling shall be done in a manner which will prevent subsequent settlement and injury to the pipe. Above this level except for the surfacing material, the Contractor may use approved material from the trench excavation.

Frost in Trench or Refill: Every effort shall be extended to eliminate the presence of frost in the bottom and sides of the trench and refill material. The Contractor shall cover and heat the trench or take such other means as necessary to eliminate the frost and chance of subsequent pipe settlement.

Cleaning: Prior to the installation of the pipeline, the Contractor shall clean the interior of the pipelines to the satisfaction of the Engineer, by such means as the Engineer approves.

Flushing, Chlorination, Dechlorination, and Testing: Flushing, chlorination, dechlorination and testing shall conform to the written specifications of the SWD as contained in the publication "Specifications for Chlorination and Dechlorination" published by and available from the SWD.

Pressure Testing: Pressure testing shall conform to the written specifications of the SWD as contained in the publication "Specifications for Pressure Testing of Large Water Pipes" published by and available from the SWD.

Should the water fail to pass the required tests and it is determined that the failure was caused by the Contractor's operations, all costs for re-sterilization, re-flushing, re-testing, etc., shall be borne by the Contractor.

The Contractor will attempt to minimize any damage to the road work that may occur during the flushing operation; however, he shall repair any such minor damage and the cost thereof will be considered as included in the price bid per linear feet of pipe.

Excavation and refill shall conform to the requirements under other applicable Contract Sections. Temporary and permanent paved and unpaved surface restoration shall conform to the requirements under other applicable Contract Sections.

Method of Measurement:

Item #1301765A – Furnishing And Installing 12” Water Main

Furnishing and installing 12” water main, being paid for on a lump sum basis, will not be measured for payment.

Item #1301768A – Furnishing And Installing 12” Water Main On Bridge

Furnishing and installing 12” water main on bridge, being paid for on a lump sum basis, will not be measured for payment.

Basis of Payment:

Item #1301765A – Furnishing And Installing 12” Water Main

Furnishing and installing 12” water main will be paid for at the contract lump sum price. This price shall include removal of existing water mains and valves and furnishing and installing new water mains, fittings, valves, appurtenances accessories from a distance of 3 feet behind the back of the bridge abutment backwall, complete in place flushed, pressure tested, disinfected and accepted by the SWD. This price shall also include all test pits, excavation, bedding, backfill, compaction, excavation support, dewatering, disposal of unsuitable materials, temporary pavement, thrust anchors, pipe restraints, valves, valve boxes, air releases, temporary piping and fittings, materials, equipment, tools, and labor incidental thereto.

Item #1301768A – Furnishing And Installing 12” Water Main On Bridge

Furnishing and installing 12” water main on bridge will be paid for at the contract lump sum price. This price shall include removal and disposal of the existing water main on bridge, and furnishing and installing the new insulated and jacketed restrained joint water main to a distance of 3-feet behind the back of the bridge abutment backwall, complete in place flushed, pressure tested, disinfected and accepted by the SWD. This price shall also include all materials, equipment, tools, and labor, incidental thereto.

Pay Item

Furnishing and Installing 12” Water Main
Furnishing and Installing 12” Water Main on Bridge

Pay Unit

L.S.
L.S.

Appendix A

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

**Minimum Rates and Classifications
for Heavy/Highway Construction**

ID#: H 22798

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

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

Project Number: 2016-10-13

Project Town: Southington

FAP Number:

State Number:

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

CLASSIFICATION

Hourly Rate

Benefits

01) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 5 and 7**

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|----------------|-------|------------|
| 1) Boilermaker | 33.79 | 34% + 8.96 |
|----------------|-------|------------|

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|---|-------|-------|
| 1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons | 33.48 | 28.76 |
|---|-------|-------|

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|------------------------------|-------|-------|
| 2) Carpenters, Piledrivermen | 32.00 | 24.42 |
|------------------------------|-------|-------|

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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|-------------------|-------|-------|
| 2a) Diver Tenders | 32.00 | 24.42 |
|-------------------|-------|-------|

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|-----------|-------|-------|
| 3) Divers | 40.46 | 24.42 |
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|------------------|-------|-------|
| 03a) Millwrights | 32.47 | 24.84 |
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| 4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray | 46.95 | 20.15 |
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|--------------------------------|-------|-------|
| 4a) Painters: Brush and Roller | 32.02 | 20.15 |
|--------------------------------|-------|-------|

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| 4b) Painters: Spray Only | 35.02 | 20.15 |
|--------------------------|-------|-------|

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| 4c) Painters: Steel Only | 34.02 | 20.15 |
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Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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| 4d) Painters: Blast and Spray | 35.02 | 20.15 |
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| 4e) Painters: Tanks, Tower and Swing | 34.02 | 20.15 |
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| 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) | 37.50 | 25.06+3% of gross wage |
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| 6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection | 35.22 | 31.99 + a |
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| | | |
|--|-------|-------|
| 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) | 40.62 | 29.71 |
|--|-------|-------|

---LABORERS----

| | | |
|---|-------|-------|
| 8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist | 28.55 | 18.90 |
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Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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| 9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen | 28.80 | 18.90 |
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|-------------------------|-------|-------|
| 10) Group 3: Pipelayers | 29.05 | 18.90 |
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| 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 | 29.05 | 18.90 |
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| 12) Group 5: Toxic waste removal (non-mechanical systems) | 30.55 | 18.90 |
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| 13) Group 6: Blasters | 30.30 | 18.90 |
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| Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe) | 29.55 | 18.90 |
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| Group 8: Traffic control signalmen | 16.00 | 18.90 |
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Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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| Group 9: Hydraulic Drills | 29.30 | 18.90 |
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---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 | 32.22 | 18.90 + a |
|---|-------|-----------|

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|-------------------------|-------|-----------|
| 13b) Brakemen, Trackmen | 31.28 | 18.90 + a |
|-------------------------|-------|-----------|

---CLEANING, CONCRETE AND CAULKING TUNNEL---

| | | |
|--|-------|-----------|
| 14) Concrete Workers, Form Movers, and Strippers | 31.28 | 18.90 + a |
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| 15) Form Erectors | 31.60 | 18.90 + a |
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Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

---ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL
IN FREE AIR:----

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|---|-------|-----------|
| 16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers | 31.28 | 18.90 + a |
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|---|-------|-----------|
| 17) Laborers Topside, Cage Tenders, Bellman | 31.17 | 18.90 + a |
|---|-------|-----------|

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|------------|-------|-----------|
| 18) Miners | 32.22 | 18.90 + a |
|------------|-------|-----------|

---TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED
AIR: ----

| | | |
|--------------|-------|-----------|
| 18a) Blaster | 38.53 | 18.90 + a |
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| 19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders | 38.34 | 18.90 + a |
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Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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| 20) Change House Attendants, Powder Watchmen, Top on Iron Bolts | 36.41 | 18.90 + a |
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|------------------------------|-------|-----------|
| 21) Mucking Machine Operator | 39.11 | 18.90 + a |
|------------------------------|-------|-----------|

---TRUCK DRIVERS---(*see note below)

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|-----------------|-------|-----------|
| Two axle trucks | 28.83 | 21.39 + a |
|-----------------|-------|-----------|

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|---------------------------------------|-------|-----------|
| Three axle trucks; two axle ready mix | 28.93 | 21.39 + a |
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|----------------------|-------|-----------|
| Three axle ready mix | 28.98 | 21.39 + a |
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| Four axle trucks, heavy duty trailer (up to 40 tons) | 29.03 | 21.39 + a |
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Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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|---|-------|-----------|
| Four axle ready-mix | 29.08 | 21.39 + a |
| <hr/> | | |
| Heavy duty trailer (40 tons and over) | 29.28 | 21.39 + a |
| <hr/> | | |
| Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids) | 29.08 | 21.39 + 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) | 38.55 | 23.55 + 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) | 38.23 | 23.55 + 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) | 37.49 | 23.55 + a |
| <hr/> | | |

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper) 37.10 23.55 + a

Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell) 36.51 23.55 + a

Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller. 36.51 23.55 + a

Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer). 36.20 23.55 + a

Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and Under Mandrel). 35.86 23.55 + a

Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine. 35.46 23.55 + a

Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder). 35.03 23.55 + a

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc. 32.99 23.55 + a

Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment. 32.99 23.55 + a

Group 12: Wellpoint Operator. 32.93 23.55 + a

Group 13: Compressor Battery Operator. 32.35 23.55 + a

Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain). 31.21 23.55 + a

Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator. 30.80 23.55 + a

Group 16: Maintenance Engineer/Oiler 30.15 23.55 + a

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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|---|-------|-----------|
| Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator. | 34.46 | 23.55 + a |
|---|-------|-----------|

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|---|-------|-----------|
| Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license). | 32.04 | 23.55 + a |
|---|-------|-----------|

**NOTE: SEE BELOW

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

| | | |
|--|-------|---------------|
| 20) Lineman, Cable Splicer, Technician | 45.43 | 6.25% + 20.70 |
|--|-------|---------------|

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|------------------------------|-------|---------------|
| 21) Heavy Equipment Operator | 40.89 | 6.25% + 18.56 |
|------------------------------|-------|---------------|

| | | |
|--|-------|---------------|
| 22) Equipment Operator, Tractor Trailer Driver, Material Men | 38.62 | 6.25% + 17.99 |
|--|-------|---------------|

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

23) Driver Groundmen 24.99 6.25% + 11.81

23a) Truck Driver 34.07 6.25% + 16.60

---LINE CONSTRUCTION---

24) Driver Groundmen 30.92 6.5% + 9.70

25) Groundmen 22.67 6.5% + 6.20

26) Heavy Equipment Operators 37.10 6.5% + 10.70

27) Linemen, Cable Splicers, Dynamite Men 41.22 6.5% + 12.20

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

28) Material Men, Tractor Trailer Drivers, Equipment Operators

35.04

6.5% + 10.45

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

Welders: Rate for craft to which welding is incidental.

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

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

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$3.00 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

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

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

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

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

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

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

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

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol.

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.

Project: Rehabilitation Of Bridge Number 05535 West Center Street Over Eight Mile River

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

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

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

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

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

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

Appendix B

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.

Appendix C

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> |
|---|---|

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) |
|-------------|---------|---------------|-------------|