INVITATION FOR BID
SOUTH COVE 4” SEWER FORCE MAIN REHABILITATION

Date of Issuance: May 31, 2018

Issued by: Burlington Department of Public Works, Water Resources Division

Due Date for Quotations: Friday, June 15, 2018 by 2 p.m.

Issuing Point of Contact:
Steve Roy, Senior Water Resources Engineer
53 Lavalley Lane, Burlington, VT 05401
802.343.0125 (c)
sroy@burlingtonvt.gov

SCOPE OF WORK
Burlington Public Works is seeking proposals for trenchless rehabilitation of 2,220 feet of 4” cast iron force main serving the South Cove pump station. Constructed in 1966, this force main has broken a number of times. Upon inspection of the breaks we’ve primarily found the source of failure to be improper bedding of the main as evidenced by rocks touching the pipe and wearing a hole after 50+ years of soil movement. Appendix A towards the end of this document provide specifications and other pertinent information for the use of Cured-In-Place Pipe (CIPP) technology to bond to the host pipe and increase its resistance to failure. Sliplining with a smaller pipe is not an acceptable option.

As opposed to earlier Invitations for Bids for this project, this one breaks out the project into three (3) individual pieces. The project will be managed and coordinated by the Owner. Bidders may submit bids for one or more of these pieces, which are:
1. Pit excavation, force main reconnection and traffic control
2. Wastewater handling
3. Force main cleaning, lining and pressure testing

DEADLINE FOR RECEIPT OF BIDS
All replies and quotes in response to this RFP must either be received: 1) electronically by the point of contact by the required deadline or 2) received in a sealed envelope clearly marked “Burlington South Cove Force Main 2018” to the address and point of contact no later than 2:00 p.m. by the above due date and time.

ANSWERS TO QUESTIONS AND REVISIONS TO REQUEST FOR PROPOSAL
Any revisions, addendums and answers to questions received at least a week before the due date will be sent to Contractors who directly received this Invitation. In addition, revisions will be posted on the City’s RFP web page http://burlingtonvt.gov/RFP/. It is advised that consultants sign up for the
GovDelivery notification so that they will be notified of any changes to the RFP page.

SITE VISIT
There will be no formal site visit. Contractors can inspect the location on their own or schedule a visit through the above point of contact.

PARTNERSHIPS
Consultants may team up with other firms, local or otherwise, in order to provide whatever diversity is deemed necessary for completing the project tasks.

BID FORMAT
Contractors are encouraged to be concise. All proposals must include, but are not limited to the following:

1. Completed bid form including lump sum mobilization/demobilization charges (if filled out), unit prices for pipe rehabilitation, total estimate, estimated start date, and signature/date by an authorized representative for the firm
2. Signed Livable Wage, Outsourcing and Union Deterrence Certifications with the bid sheet and described in the Supplemental General Conditions.

Note that the selected Contractor shall be required to submit insurance certificates, performance and payment bonds, and may be asked to provide a client list if they haven’t already done work in the City of Burlington.

BID EVALUATION
Bids will be reviewed and evaluated by Department staff based on the information provided in the proposal. Additional information may be requested prior to final selection. Given the magnitude of this project, Board of Finance and City Council approval will be required. It is anticipated that a decision will be made within 45 days of the due date.

CONTRACT REQUIREMENTS
The selected Contractor must be willing to enter into an agreement with the Owner similar to the Draft Agreement provided in the document. Contractors are advised to review all the attached sections of this document in advance of submitting a proposal. The City of Burlington reserves the right to alter or amend any or all of these provisions in the project contract.

LIMITATIONS OF LIABILITY
The City of Burlington, Vermont assumes no responsibility and liability for costs incurred by parties responding to this Invitation for Bids or responding to any further requests for interviews, additional data, etc., prior to the issuance of the contract.

REJECTION OF PROPOSALS
The City of Burlington reserves the right to reject any or all proposals, to negotiate with one or more parties, or to award the contract in the City’s best interests, including selecting which projects it can afford to do at this point in time or in consideration of the proposed contractor’s schedule. The City reserves the right to re-advertise for additional proposals and to extend the deadline for submission of the proposals.

OWNERSHIP OF DOCUMENTS
Proposals, plans, specifications, and other documents prepared and submitted under this RFP shall become the property of the City. Proposals, plans, specifications, basis of designs, electronic data, designs and reports prepared under any agreement between the selected contractor or consultant and the city shall become the property of the City. Records shall be furnished to the City by the Contractor.
upon request at any time, however the Contractor or Consultant may retain copies of the original documents.

PUBLIC RECORDS
Any and all records submitted to the City, whether electronic, paper, or otherwise recorded, are subject to the Vermont Public Records Act. The determination of how those records must be handled is solely within the purview of City. All records considered to be trade secrets, as that term is defined by subsection 317(c)(9) of the Vermont Public Records Act, shall be identified, as shall all other records considered to be exempt under the Act. It is not sufficient to merely state generally that the proposal is proprietary or a trade secret or is otherwise exempt. Particular records, pages or section which are believed to be exempt must be specifically identified as such and must be separated from other records with a convincing explanation and rationale sufficient to justify each exemption from release consistent with Section 317 of Title 1 of the Vermont Statutes Annotated.

NOTICE OF NON-APPROPRIATION
Bidders are hereby given notice that any obligations of the City to make payments under an agreement awarded pursuant to this RFP during several fiscal years shall constitute a current expense of the City and shall not in any way be construed to be a debt of the City in contravention of any applicable constitutional, statutory limitation or requirement, or the City’s charter, nor shall anything contained in such a contract constitute a pledge of the credit or tax revenues, funds or monies of the City. The decision whether or not to budget and appropriate funds during each fiscal year of the City is within the discretion of the governing body of the City. The obligations of the City under such a contract shall be subject to annual appropriations by the governing body of the City.

In the event no funds or insufficient funds are appropriated and budgeted for payments due under such a contract, the City may elect to terminate the contract in accordance with the paragraph on non-appropriation. The City’s election to terminate must be exercised by delivering its prior written notice of its intent to terminate together with a certified statement by an authorized official indicating that insufficient sums were appropriated for the ensuing fiscal year of the City. Termination under this provision shall be effective upon the expiration of the applicable fiscal year of the contract and payment of all contract payments during that fiscal year.

OWNER SUPPLIED DOCUMENTS
The following owner supplied documents are provided in Appendix A at the very end of this RFP.

1. Technical specifications on Scope of Work, Guarantees, Traffic Control and Cured-In-Place Pipe (CIPP) technology.
2. Map showing the pump station, force main and general area.
3. Pictures of force main from 2013 break.
4. Table showing 2017 historical inflow and chart showing recent pump station inflows.
5. Design of storage tank installed in 2011. The emergency storage (above normal operating levels) is estimated at around 5000 gallons.
**BID FORM – SOUTH COVE FORCE MAIN REHABILITATION**

**Contractor:** __________________________  **Address:** ___________________________________________

**Contact:** ___________________________  **Telephone/Email:** ___________________________________________

**Subcontractor(s), if applicable:** ___________________________________________

### BID ITEM #1 - Excavation
(See Notes below)

<table>
<thead>
<tr>
<th>EST. QTY</th>
<th>UNIT</th>
<th>COST PER UNIT</th>
<th>EST. TIME (DAYS)</th>
<th>SUBTOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lump sum</td>
<td>$</td>
<td>n/a</td>
<td>$</td>
</tr>
<tr>
<td>5</td>
<td>each</td>
<td>$</td>
<td></td>
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<tr>
<td>5</td>
<td>each</td>
<td>$</td>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>

**TOTAL ALL BID #1 ITEMS:** __________________________

### BID ITEM #2 - Wastewater
(See Notes below)

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<tr>
<th>EST. QTY</th>
<th>UNIT</th>
<th>COST PER UNIT</th>
<th>EST. TIME (DAYS)</th>
<th>SUBTOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lump sum</td>
<td>$</td>
<td>n/a</td>
<td>$</td>
</tr>
<tr>
<td>6</td>
<td>days</td>
<td>$</td>
<td></td>
<td>$</td>
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</tbody>
</table>

**TOTAL ALL BID #2 ITEMS:** __________________________

### BID ITEM #3 - Relining
(See Notes below)

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<th>COST PER UNIT</th>
<th>EST. TIME (DAYS)</th>
<th>SUBTOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lump sum</td>
<td>$</td>
<td>n/a</td>
<td>$</td>
</tr>
<tr>
<td>2,220' of 4” cast iron pipe</td>
<td>foot</td>
<td>$</td>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>

**TOTAL ALL BID #3 ITEMS:** __________________________
NOTES:

1. See Technical Specification Section 01010 (Summary of Work) for responsibilities of the various Contractors and the Owner. Contractors can bid on one or more of the above items. The Owner reserves the right to sign three (3) separate agreements if that is found to be in its best interest.

2. While Owner is seeking a price from BIDDERS to handle wastewater from this station while the force main is being rehabilitated, Owner reserves the right to remove Bid Item #2.

3. Evaluation of each Bid is based on each item separately. BIDDER hereby agrees to commence WORK under this contract on the date of issuance of the NOTICE TO PROCEED and to fully complete the PROJECT by August 24, 2018. If project delays are caused by the BIDDER, then the BIDDER further agrees to pay as liquidated damages, the sum of $200 for each consecutive calendar day thereafter as provided in Section 4 of the General Conditions.

There is no required Bid Bond. A Performance Bond and a Payment Bond, each for 100% of the Bid value, shall be submitted by the awarded Contractor at the time of Contract award. Irrevocable Letters of Credit for 100% of the Bid value may be substituted by the CONTRACTOR for each of the Bonds. The Payment Bond (or Irrevocable Letter of Credit) will not be released until satisfactory evidence has been provided to the OWNER that all outstanding debts, liens, and judgments incurred by the CONTRACTOR for the performance of SUBCONTRACTORS, or supplies and materials incorporated into the Work have been paid. The Performance Bond (or Irrevocable Letter of Credit) will be held in force for one year after the Substantial Completion and will serve as warranty of the Contract. The Irrevocable Letter of Credit for Performance (if used in place of a Performance Bond) may not be reduced or released prior to completion of the one year warranty period unless authorized by the OWNER and approved by the Lending Authority.

BIDDER acknowledges receipt of the following ADDENDUM:

By signing this bid sheet, the Contractor agrees to abide by all specifications and conditions in these Contract Documents.

_________________________ Signature
_________________________ Title
_________________________ Date
Certification of Compliance with the City of Burlington’s Livable Wage Ordinance

(TO BE SUBMITTED WITH BID)

I, _____________________ , on behalf of ____________________________ (“the Contractor”) in connection with a contract for _________________ services that we provide to the City, hereby certify under oath that the Contractor (and any subcontractors under this contract) is and will remain in compliance with the City of Burlington’s Livable Wage Ordinance, B.C.O. 21-80 et seq., and that

(1) as a condition of entering into this contract or grant, we confirm that all covered employees as defined by Burlington’s Livable Wage Ordinance (including the covered employees of subcontractors) shall be paid a livable wage (as determined, or adjusted, annually by the City of Burlington’s chief administrative officer) and provided appropriate time off for the term of the contract;

(2) a notice regarding the applicability of the Livable Wage Ordinance shall be posted in the workplace(s) or other location(s) where covered employees work;

(3) we will provide verification of an employee’s compensation, produce payroll or health insurance enrollment records or provide other relevant documentation (including that of any subcontractor), as deemed necessary by the chief administrative officer, within ten (10) business days from receipt of a request by the City;

(4) we will cooperate in any investigation conducted by the City of Burlington’s City Attorney’s office pursuant to this ordinance; and

(5) we will not retaliate (nor allow any subcontractor to retaliate) against an employee or other person because an employee has exercised rights or the person has cooperated in an investigation conducted pursuant to this ordinance.

Date __________________________ By: ____________________________________________

Contractor

Subscribed and sworn to before me: __________________________

Notary
Certification of Compliance with the City of Burlington’s Outsourcing Ordinance

(TO BE SUBMITTED WITH BID)

I, __________________________, on behalf of __________________________ (Contractor) and in connection with the __________________________ [project], hereby certify under oath that (1) Contractor shall comply with the City of Burlington’s Outsourcing Ordinance (Ordinance §§ 21-90 – 21-93); (2) as a condition of entering into this contract or grant, Contractor confirms that the services provided under the above-referenced contract will be performed in the United States or Canada.

Dated at _____________, Vermont this ___ day of ____________, 20__.

By: __________________________
   Duly Authorized Agent

Subscribed and sworn to before me: __________________________
   Notary
Certification of Compliance with the City of Burlington’s Union Deterrence Ordinance

(TO BE SUBMITTED WITH BID)

I, __________________________, on behalf of __________________________ (Contractor) and in connection with __________________________ (City contract/project/grant), hereby certify under oath that __________________________ (Contractor) has not advised the conduct of any illegal activity, and it does not currently, nor will it over the life of the contract advertise or provide union deterrence services in violation of the City’s union deterrence ordinance.

Dated at _____________________, Vermont this ____ day of __________________, 20__.

By:_______________________________________________
   Duly Authorized Agent

Subscribed and sworn to before me:     __________________________
   Notary
NOTICE OF AWARD

TO: __________________________________________

__________________________________________

PROJECT Description: __________________________________________

__________________________________________

OWNER’s Project Number: South Cove FM

____________________________________________________________________________________

The OWNER has considered the BID submitted by you for the above described WORK in response to its ADVERTISEMENT FOR BIDS dated _________________, 20____, and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of $____________________

You are required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may, at its option, consider the BIDDER in default, in which case the BID BOND or certified check accompanying the proposal shall become the property of the OWNER.

The OWNER, within ten (10) days of receipt of acceptable performance BOND, payment BOND and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw their signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The OWNER shall issue the NOTICE TO PROCEED within ten (10) days of the execution of the Agreement. The “Date of Issuance” of the NOTICE TO PROCEED shall start the CONTRACT time. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended only by mutual written agreement between the OWNER and CONTRACTOR.

If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _______ day of _____________________________, 20____.

__________________________________________

OWNER

__________________________________________

(Print or Type Name)

Title: __________________________________________

__________________________________________

Signature

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

Dated this _______ day of _____________________________, 20____.

__________________________________________

CONTRACTOR

__________________________________________

(Print or Type Name)

Title: __________________________________________

__________________________________________

Signature
AGREEMENT

THIS AGREEMENT, made this _____ day of __________, 20____, by and between City of Burlington, hereinafter called "OWNER" and

____________________________________ doing business as (an individual, a partnership or a corporation)
hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of ______________________
_________________________________________________(Project Name).

2. The CONTRACTOR will furnish all the material, supplies, tools, equipment, labor and other services
necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the WORK required by the CONTRACT DOCUMENTS on the date
of issuance of the NOTICE TO PROCEED and will complete the same by August 24, 2018 unless the
period for completion is extended otherwise by the CONTRACT DOCUMENTS. The CONTRACTOR
acknowledges that the date of beginning and the time for completion of the WORK are essential
conditions of the CONTRACT DOCUMENTS and the CONTRACTOR further agrees to pay as liquidated
damages, the sum of $200 for each consecutive calendar day that the CONTRACTOR shall be in default
after the time specified in the Agreement and as provided in Section 4 of the General Conditions.

4. The CONTRACTOR agrees to perform all the WORK described in the CONTRACT DOCUMENTS and
comply with the terms therein for the sum of $____________________ or as shown in the BID schedule.

5. The term "CONTRACT DOCUMENTS" means and includes the following:
- Request for Proposal
- BID SHEET
- Certifications of Compliance with City of Burlington Ordinances
- Notice of Award
- Agreement
- Payment BOND
- Performance BOND
- Notice to Proceed
- Partial Release and Waiver of Lien
- Change Order Format
- Certificate of Substantial Completion
- Certificate of Final Completion and Acceptance of Work
- General Conditions
- Supplemental General Conditions
- Hazardous Materials and Historic Preservation
- TECHNICAL SPECIFICATIONS prepared or issued by Burlington Water Resources and dated
  __________, 20___.
- ADDENDA: No. ____through ____, dated _______________________________

6. OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General
Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors,
administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized
officials, this Agreement in two copies, each of which shall be deemed an original on the date first above written.

OWNER: __ City of Burlington ___________________ ATTEST: ________________________________
BY: ____________________________________
   (Signature)
Name: ____________________________________
   (Print or Type)
Title: ____________________________________

CONTRACTOR: ____________________________
BY: ____________________________________
   (Signature)
Name: ____________________________________
   (Print or Type)
Address: ____________________________________
________________________________________
________________________________________
   Phone #

ATTEST: ____________________________________
   (Signature)
Name: ____________________________________
   (Print or Type)
Title: ____________________________________

Name: ____________________________________
   (Print or Type)
Title: ____________________________________

(Signature)

(Signature)

(Signature)

(Signature)
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS THAT:

__________________________________________
(Name of CONTRACTOR)

__________________________________________
(Address of CONTRACTOR)

a _____________________________, hereinafter called Principal,
(Corporation, Partnership or Individual)

and

__________________________________________
(Name of Surety)

__________________________________________
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

__________________________________________
(Name of OWNER)

__________________________________________
(Address of OWNER)

hereinafter called OWNER, in the penal sum of _____________________________ Dollars, $
(____________) in lawful money of the United States, for the payment of which sum well and truly to be
made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with
the OWNER, dated the _____ day of _______________________, 20_____, a copy of which is hereto attached
and made a part hereof for the construction of:

__________________________________________

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and
corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such
contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants,
oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the
construction of such WORK and all insurance premiums on said WORK, and for all labor performed
in such WORK
whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in force and
effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change,
extension of time, alteration or addition to the terms of the contract or to the WORK to be performed hereunder or
the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does
hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to
the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the
right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed
an original, this the _____ day of _______________________, 20_____.

ATTEST: ________________________________________________

______________________________________________________
(Principal Secretary)

(Seal)

______________________________________________________
Witness as to Principal

______________________________________________________
Address

______________________________________________________
______________________________________________________
Witness as to Surety

______________________________________________________
Address

Principal’s Printed Name

By: ______________________________________ (s)

Address: ________________________________________________

______________________________________________________
Surety

By: ______________________________________

Address: ________________________________________________

______________________________________________________
Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department’s most current list (Circular 570) as amended and be authorized to transact business in the State of Vermont.
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS THAT:

___________________________________________________________
(Name of CONTRACTOR)

___________________________________________________________
(Address of CONTRACTOR)

a ____________________________________, hereinafter called Principal, and
(Corporation, Partnership or Individual)

___________________________________________________________
(Name of Surety)

___________________________________________________________
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

___________________________________________________________
(Name of OWNER)

___________________________________________________________
(Address of OWNER)

hereinafter called OWNER, in the penal sum of ____________________________ Dollars,
$(_________________) in lawful money of the United States, for the payment of which sum well and truly to be
made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with
the OWNER, dated the _____ day of _____________________, 20_____, a copy of which is hereto attached
and made a part hereof for the construction of:

___________________________________________________________

NOW, THEREFORE, if the principal shall well, truly and faithfully perform its duties, all the undertakings,
covenants, terms, conditions and agreements of said contract during the original term thereof, and any extensions
thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year
guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully
indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to
do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making
good any default, then this obligation shall be void; otherwise to remain in full force and effect.
PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, 
extension of time, alteration or addition to the terms of the contract or to the WORK to be performed hereunder 
or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it 
does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the 
contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the 
right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed 
an original, this the _____ day of ______________________, 20_____ 

ATTEST:

Principal’s Printed Name

(Principal Secretary) By: ______________________________(s)

(Seal)

Address: _____________________________________________

Witness as to Principal

Address

____________________________

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Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should 
execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department’s most current list 
(Circular 570) as amended and be authorized to transact business in the State of Vermont.
NOTICE TO PROCEED

To: ___________________________  Date of Issuance: ________________

(CONTRACTOR)

____________________________________

Project: __________________________________

____________________________________

____________________________________

You are hereby notified to commence all WORK on this date in accordance with the Agreement dated _________________, ___________. The date of completion of all WORK is _________________, _______________.

____________________________________

(OWNER)

By:_________________________________________

(Printed or Typed Name)

By:_________________________________________

(Signature)

Title: ____________________________________

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by ______________________________________________________________, (Name of CONTRACTOR)

this the ____ day of ________________, _______________.

By:_________________________________________

(Printed or Typed Name)

By:_________________________________________

(Signature)
INSTRUCTIONS FOR CONTRACTORS OR SUBCONTRACTORS
RELEASE AND WAIVER OF LIEN FORM

1. At the preconstruction meeting, the OWNER will receive from the CONTRACTOR a list of all major items (s)he intends to SUBCONTRACT.

2. Prior to the first requisition for payment, the OWNER will inform the CONTRACTOR as to which of these SUBCONTRACTORS or vendors may be required to complete a Release of Lien Form. Note that 40 CFR §33.302 requires CONTRACTOR to pay their SUBCONTRACTORS for satisfactory performance within 30 days of payment to CONTRACTOR by OWNER. CONTRACTOR shall comply with this requirement.

3. The CONTRACTOR shall include in the payment package a Release of Lien Form for the overall CONTRACT and those of any SUBCONTRACTORS or vendors so identified by the OWNER.

4. For all interim payments prior to 90% completion of the CONTRACT, the CONTRACTOR may delete, “…the undersigned does hereby waive, release and relinquish any and all claims, demands and rights of lien for all work, labor, materials, machinery or other goods, equipment or services done, performed or furnished…” from the first statement.

5. Final payment requires complete wording in the first statement and a fully executed form.

GENERAL CONTRACTOR’S OR SUBCONTRACTOR’S
RELEASE AND WAIVER OF LIEN

For and in consideration of the receipt of $_________________________, in payment for labor and/or materials furnished, the undersigned does hereby waive, release and relinquish any and all claims, demands and rights of lien for all work, labor, materials, machinery or other goods, equipment or services done, performed or furnished for the construction located at the site hereinafter described, to wit:

___________________________________________________________________
(Project Name and OWNER)

___________________________________________________________________
__________________________________, Vermont as of __________________________ (Date)

The undersigned further warrants and represents that any and all valid labor and/or materials and equipment bills, now due and payable on the property herein above described in behalf of the undersigned, have been paid in full to date of this waiver, or will be paid from these funds.

$__________________________________ $__________________________________
Total Paid to Date This Contract Current Payment Due

$__________________________________ $__________________________________
Total Billed to Date This Contract CONTRACTOR/SUBCONTRACTOR

__________________________________
Witness Signature

__________________________________
Witness Printed Name

_______________________________
By: ______________________________
Title: ______________________________
CHANGE ORDER #

Date: ____________________________ Agreement Date: ____________________________
Contract #: ____________________________ Original Price: $________________________
Contract Title: ____________________________ Notice to Proceed Date: _____________
Owner: ____________________________ Calendar Days: ____________________________
Contractor: ____________________________ Original Completion Date: _________
Owner: ____________________________

The following changes are hereby made to the CONTRACT DOCUMENTS:

DESCRIPTION:

JUSTIFICATION:

PRICE: This C.O.\(^{(1)}\) will (not change/increase/decrease) the Contract Price By: $________
   Current Contract Price per most recent C.O.: $____________
   The new Contract Price including this C.O. is: $________

TIME: Current Contract Calendar Days as per most recent C.O.: Calendar Days ______
   This C.O. will (not change/increase/decrease) the Contract Calendar Days by: Calendar Days ______
   The new Contract Calendar Days including this C.O. is: Calendar Days ______
   The new Contract Completion Date is, therefore: ______

NOTE: The CONTRACTOR must provide a Revised Project Schedule to reflect increases or decreases in
   Contract Time as authorized by this C.O.

REQUESTED BY: ____________________________ Print or Type Name ____________________________
   Signature ____________________________

SIGNATURES/APPROVALS:
   Stipulated price and time adjustment includes all costs and time associated with the above described change.
   CONTRACTOR waives all rights for additional compensation or time extension for said change. CONTRACTOR
   and OWNER agree that the price(s) and time adjustment(s) stated above are equitable and acceptable to both
   parties.

   Recommended By (Owner): ____________________________ Print or Type Name ____________________________
   Signature ____________________________

   Accepted By (CONTRACTOR): ____________________________ Print or Type Name ____________________________
   Signature ____________________________

   Ordered By (OWNER): ____________________________ Print or Type Name ____________________________
   Signature ____________________________

\(^{(1)}\) Change Order
CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER ____________________________  OWNER’s Project Number ____________

Project Name ____________________________________________________________

CONTRACTOR ____________________________  Contract Date _________________

Contract for _____________________________________________________________

Project or Specified Part Shall Include ______________________________________

DEFINITION OF SUBSTANTIAL COMPLETION

The date of Substantial Completion of a Project or specified part of a Project is the date when the construction is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part of the Project can be utilized for the purpose for which it was intended.

To: __________________________________________ (OWNER)

And To: ______________________________________ (CONTRACTOR)

The WORK performed under this CONTRACT has been inspected by authorized representatives of the OWNER, CONTRACTOR, and OWNER, and the Project or Specified Part of the Project is hereby declared to be Substantially Completed as of the following date:

Date of Substantial Completion: ________________________________

If a tentative list of items to be completed or corrected is appended hereto, the failure to include an item on it does not alter the responsibility of the CONTRACTOR to complete all the WORK in accordance with the CONTRACT DOCUMENTS and CONTRACT TIME.

Recommended By:

OWNER __________________________________ (Signature) ____________ Date

(Print or Type Name) ______________________________________________________
The CONTRACTOR accepts the above Certificate of Substantial Completion.

CONTRACTOR

CONTRACTOR

EXCEPTIONS AS TO GUARANNEES AND WARRANTIES:

ATTACHMENTS:

1) Punch List Dated: _________________________

2) List the CONTRACTOR’s Warranty Start and End Dates along with any Extended Warranty information here. Some items (such as roofing) may have a manufacturer’s warranty longer than one year. Any documentation to support warranty requests (bill of sale, etc.) need to be supplied as part of the OWNER’s O&M Manual under the warranty section.
CERTIFICATE OF FINAL COMPLETION AND ACCEPTANCE OF WORK

CONTRACT NO. _______________________________ AGREEMENT DATE: ______________

CONTRACT DESCRIPTION: ___________________________________________________________

Notice to Proceed Date of Issuance: ___________________________________________________

Completion Date per Agreement and Change Orders # _____ thru # _____: ___________________

(Date)

FINALE CERTIFICATION OF CONTRACTOR

I hereby certify that the WORK as identified in the Final Estimate of Payment for construction CONTRACT WORK dated ______________________, represents full compensation for the actual value of WORK completed. All WORK completed conforms to the terms of the AGREEMENT and authorized changes.

__________________________________________
CONTRACTOR

Signature

______________________________
Date

Print or Type Name

______________________________
Title

FINAL CERTIFICATION OF OWNER

I have reviewed the CONTRACTOR’S Final Payment Request dated __________ and hereby certify that to the best of my knowledge, the cost of the WORK identified on the Final Estimate represents full compensation for the actual value of WORK completed and that the WORK has been completed in accordance with the terms of the AGREEMENT and authorized changes. This certification is provided in accord with the terms of GENERAL CONDITION number 16.3.

__________________________________________
OWNER

Signature

______________________________
Date

Print or Type Name

FINAL ACCEPTANCE OF OWNER

I, as representative of the OWNER, accept the above Final Certifications and authorize Final Payment in the amount of $_____________________ and direct the CONTRACTOR’S attention to the GENERAL CONDITION #5. The guaranty for all WORK completed subsequent to the date of SUBSTANTIAL COMPLETION, expires one (1) year from the date of this Final Acceptance.

__________________________________________
OWNER

Signature

______________________________
Date

Print or Type Name

______________________________
Title
1. The CONTRACTOR shall furnish and pay the cost, including taxes (except tax exempt entities) and all applicable fees, of all the necessary materials and shall furnish and pay for full time on-site superintendence during any construction activity, labor, tools, equipment, and transportation, and perform all the Work required for the construction of all items listed and itemized under the Bid Schedule of the Bidder's Proposal attached hereto in strict accordance with the Plans, Specifications and requirements, general conditions and appendix which are attached hereto and made a part hereof, and any amendments thereto and such supplemental plans and specifications which may hereafter be approved.

2. The OWNER shall provide the land and/or construction easements upon which the Work under this Contract is to be done, and will, so far as is convenient, permit the CONTRACTOR to use as much of the land as is required for the erection of temporary construction facilities and storage of materials, together with the right of access to same, but beyond this, the CONTRACTOR shall provide at the CONTRACTOR's cost and expense any additional land required.

3. In the event the OWNER is dissatisfied with the slow progress or incompetence in the performance of the Work in accordance with the schedule for completion of the various aspects of construction, the OWNER shall give the CONTRACTOR written notice in which the OWNER shall specify in detail the cause of dissatisfaction. Should the CONTRACTOR fail or refuse to remedy the matters complained of within five days after the written notice is received by the CONTRACTOR the OWNER shall have the right to take control of the Work and either make good the deficiencies of the CONTRACTOR itself or direct the activities of the CONTRACTOR in doing so, employing such additional help as the OWNER deems advisable. In such events the OWNER shall be entitled to collect from the CONTRACTOR any expenses in completing the Work.

4. The OWNER may withhold liquidated damages at the rate specified in the Bid from the amount payable to the CONTRACTOR for each calendar day that the CONTRACTOR is in default after the time of completion stipulated in these Contract Documents. It is understood that the amount is approximately equal to the interest and other charges incurred by the OWNER.

5. The CONTRACTOR guarantees all material and equipment furnished and all Work performed for a period of one (1) year from the date of substantial completion of the Contract (or one (1) year from Final Completion of the Contract for all work completed after Substantial Completion). The CONTRACTOR guarantees that the facility is free from defects due to faulty materials or workmanship and the CONTRACTOR shall make the necessary corrections or repairs to correct these defects as outlined further in Specification Section 01740. Longer equipment or material guarantees shall be documented in the Certificate of Substantial Completion.

6. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the Work as specified in the Contract Documents. If the CONTRACTOR observes that the Contract Documents are at variation with any laws, ordinances, rules or regulations, the CONTRACTOR shall promptly notify the OWNER in writing and any necessary changes shall be adjusted through the use of Contract Change Orders.

7. The CONTRACTOR agrees to pay all claims for labor, materials, services and supplies and agrees to allow no such charge to be fixed on the property of the OWNER.

8. The CONTRACTOR agrees to comply with all laws, rules and regulations that apply to related Work.

9. The actual performance of Work and superintendence shall be performed by the CONTRACTOR, but the OWNER shall, at all times, have access to the premises for the purpose of observing or inspecting the Work performed by the CONTRACTOR.
10. It is fully understood and agreed that none of the requirements of this Contract shall be considered as waived unless changes are made in writing and then only by the persons executing this Contract.

11. The CONTRACTOR agrees not to sublet or assign this Work without the written consent of the OWNER.

12. The CONTRACTOR shall have full responsibility under these General Conditions, General Provisions, or Plans and Specifications for any SUBCONTRACTs which the CONTRACTOR may let.

13. All questions or controversies which may arise between the CONTRACTOR and the OWNER, under or in reference to this Contract, should be resolved, to the fullest extent possible at a meeting between the CONTRACTOR, the OWNER. The agreements reached at such meetings shall be carefully documented and become final and binding on all parties concerned.

14. **INDEMNIFICATION:** The CONTRACTOR agrees that it shall indemnify, defend, and hold harmless the OWNER, its officers, agents and employees from and against all losses and all claims, including attorneys fees, demands, payments, suits, actions, recoveries, and judgments of every nature, and description brought or recovered against them by reason of any act or omission, intentional or negligent, of the said CONTRACTOR, its agents, or employees, in the execution of the Work or performance of the services to be provided under this Agreement or in guarding the same.

OWNER is responsible for its own actions. The CONTRACTOR is not obligated to indemnify the OWNER or its officers, agents and employees for any liability of the OWNER, its officers, agents and employees attributable to its, or their own, negligent acts, errors or omissions.

In the event the OWNER, its officers, agents or employees are notified of any claims asserted against it or them to which this indemnification clause may apply, the OWNER or its officers, agents and employees shall immediately thereafter notify the CONTRACTOR in writing that a claim to which the indemnification agreement may apply has been filed.

15. **PAYMENT**

15.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the OWNER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the OWNER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. The OWNER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing approval of payment, or return the partial payment estimate to the CONTRACTOR indicating in writing reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within thirty (30) days of the presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all WORK covered by the CONTRACT DOCUMENTS. However, after fifty (50) percent of the WORK has been completed, if the OWNER finds that satisfactory quality and progress is being made, the OWNER shall reduce Retainage to five (5) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount shall be further reduced below five (5) percent to only that amount related to the punch list and necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

15.2 The entire balance found to be due the CONTRACTOR (through the Partial Payment Estimate), excepting such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR. Such payment shall be conditioned, however, upon the submission by the CONTRACTOR of evidence satisfactory
to the OWNER that all claims for labor, material, and any other outstanding indebtedness in connection with this Contract have been paid (Release of Lien Form).

15.3 Upon final completion and acceptance of the WORK, the OWNER shall issue a certificate attached to the final payment request that the WORK has been accepted under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

15.4 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance BOND or Payment BOND.

16. SUSPENSION OF WORK: The OWNER may suspend the work or any portion thereof for a period of not more than ninety days or such further time as agreed by the CONTRACTOR. The CONTRACTOR will be allowed an extension of contract time directly attributable to any suspension.

17. TERMINATION

17.1 After ten (10) days from delivery of a written notice to the CONTRACTOR, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the CONTRACTOR shall be paid for all work executed and any expense sustained.

17.2 Upon completion or termination of the Work, the CONTRACTOR shall remove from the vicinity of the Work all equipment and all temporary structures, waste materials and rubbish resulting from its operations, leaving the premises in a neat and presentable condition. In the event of failure to do so, the same may be done by the OWNER at the expense of the CONTRACTOR.

18. Surety companies executing Bonds must appear on the Treasury Department’s most current list (Circular 570 as amended) and be authorized to transact business in the State of Vermont.

19. CONTRACT CHANGE ORDERS

19.1 All changes affecting the Project’s construction cost, length of time, or modifications of the terms or conditions of the CONTRACT, must be authorized by means of a written CONTRACT Change Order which is mutually agreed to by the OWNER and CONTRACTOR. The CONTRACT Change Order will include extra WORK, WORK for which quantities have been altered from those shown in the BID Schedule, as well as decreases or increases in the quantities of installed units which are different from those shown in the BID Schedule because of final measurements. All changes must be recorded on a CONTRACT Change Order (which form is part of these CONTRACT Documents) and fully executed before they can be included in a partial payment estimate. Changes for WORK, quantities, and/or conditions will include any respective time adjustment, if justified. Time adjustments will require an updated Project Schedule with the Change Order.

19.2 When the Contract sum is, in whole or in part, based on unit prices, the OWNER reserves the right to increase or decrease a unit price quantity as may be deemed reasonable or necessary in order to complete the WORK contemplated by this CONTRACTOR. Overhead and Profit (OHP) will not be included in a unit quantity Change Order.

19.3 The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment to determine a mutually acceptable unit price.

1. The unit price may be re-evaluated and adjusted under the following conditions:
a. if the variation in the quantity of a particular item of Unit Price Work performed by CONTRACTOR differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and

b. if there is no corresponding adjustment with respect to any other item of Work; and

c. if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or if OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price.

2. Either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

19.4 In addition, there may be added an amount to be agreed upon to cover the cost of general overhead and profit (OHP). The markup for OHP by the General CONTRACTOR may not exceed 10% if the General CONTRACTOR executes the WORK. If a SUBCONTRACTOR executes the WORK, the SUBCONTRACTOR’s OHP may not exceed 10% of the cost of the actual WORK, and the General CONTRACTOR may not apply for more than a 5% markup for OHP on the actual WORK (not including the SUBCONTRACTOR’s OHP).

19.5 In the event that a unit cost cannot be agreed upon, or when Extra Work is requested at the direction of the Owner or Engineer the following shall be used to determine said unit cost. Any additional costs for Public Liability Insurance and Property Damage Insurance that are required in the Contract will be allowed and reimbursed at the actual cost to the Contractor.

a. Labor. For all machine or equipment operators, other workers, and supervisors in direct charge of the specific operation, the Contractor shall receive the actual wages agreed upon before beginning the work and were paid to the workers performing the work, to which shall be added an amount equal to 10 percent for profit. If the Contractor elects to use employee(s) more skilled than required to perform the extra work, the Agency reserves the right to allow compensation for said employee(s) to be capped at 125% of the applicable Davis-Bacon wage rate of the base skill level required to perform the work.

Workers Compensation Insurance, Unemployment Compensation Insurance, and Social Security charges on labor items as paid by the Contractor will be allowed. Other employee insurances (health, disability, e.g.) being paid by the Contractor just prior to the work being ordered will also be allowed, provided the Contractor submits an applicable notarized insurance rate schedule from its insurance agent. The Contractor shall submit an Agency form indicating all applicable insurances and overhead items for each employee involved in the extra work.

The Contractor will be allowed an additional 10% of the actual wages paid to the employee as compensation for administration charges and any other additional costs. Additional cost or charge for the Superintendent shall not be allowed.

b. Materials. The Contractor shall receive the actual cost including freight charges (both as submitted on original receipted bills) for all materials furnished and used. Ten percent shall be added thereto for overhead, profit and any other costs incurred in supplying the materials. Vermont sales tax shall not be included.

c. Equipment. The Contractor will be reimbursed as described below. Equipment that is used shall be specifically described by year, manufacturer, model number, and any other information required to identify the appropriate hourly rate in the Rental Rate Blue Book published by Equipment Watch (“Blue Book”). In the event the Contractor elects to use equipment of a higher rental value than equipment suitable for the work, payment will be made at the rate applicable to suitable equipment.

i. Contractor Owned Equipment.
1. **Ownership Costs.** The Contractor will be reimbursed for its ownership costs for self-owned equipment at the rates agreed to before the work begins. These rates shall be on an hourly basis and shall not exceed the monthly ownership rates listed in the current Blue Book divided by 176. The rates will be adjusted for depreciation as computed and published in the Blue Book rate adjustment tables, but will not be adjusted as recommended on the Blue Book regional adjustment maps. The rates for ownership costs will be total reimbursement to the Contractor for all non-operating costs of the equipment, including depreciation, insurance, taxes, interest, storage, overhead, repairs, and profit. The maximum duration for reimbursement in a day shall not exceed eight hours unless the equipment actually is operated for more than eight hours on a particular day, in which case the rate shall be paid for all hours the equipment actually worked on that day.

2. **Operating Costs.** The rates for operating costs include fuel, lubricants, other operating expendables, and preventative and field maintenance. The Contractor will be reimbursed the amount derived as the product of the number of hours of actual use multiplied by the Blue Book estimated operating cost per hour. Operating costs do not apply to equipment idle time. Operating costs do not include the operators’ wages. Except as otherwise provided, the rates to be used for computation shall be those in effect at the time the force account work is performed as reflected in the applicable publication of the Blue Book.

3. In the event that an ownership cost rate and/or an operating cost rate is not established in the Blue Book for a particular piece of equipment, the Engineer shall establish a rate(s) for that piece of equipment consistent with its costs and expected life. The Contractor shall make no charge for small tools that are considered as having a replacement value of less than $500.

ii. **Rented Equipment.** In the event the Contractor does not own a specific type of equipment and must rent, the Contractor will be reimbursed the actual cost for the equipment, as submitted by invoice, for the time that the equipment is used to accomplish the work. Vermont sales tax shall not be included. The Agency reserves the right to limit the hourly rate to the maximum amount allowed by Blue Book in the event that the prime contractor is a subsidiary of, or has a close affiliation to, the firm supplying the rented equipment.

iii. **Maximum Amount Payable.** The maximum amount of reimbursement for the ownership cost of Contractor owned equipment or the rental cost of rented equipment is limited to the original purchase price of the equipment.

iv. **Equipment Downtime.** No rental cost or operating cost will be paid for downtime for either rented equipment or Contractor owned equipment.

v. **Transportation Costs.** The Contractor will be paid for the reasonable documented cost of transporting both Contractor owned and rented equipment to the work location and back to its original location or a new location if the cost is less.

d. **Subcontracted Work.** The Contractor shall receive the actual cost, as submitted on original receipted bills, for all extra and force account work subcontracted to others. 10 percent shall be added thereto for overhead, profit and any other costs incurred to perform the subcontracted work. However, the Agency reserves the right to use the force account procedures as depicted previously in this subsection in the event that the cost of reimbursable subcontracted work is deemed excessive. The compensation as herein provided shall be received by the Contractor as payment in full for Extra Work done on a force account basis. The Contractor’s representative and the Engineer shall compare records of Extra Work on a force account basis at the end of each day.
Copies of these records shall be made on Agency forms provided for this purpose and shall be signed by both the Engineer and Contractor’s representative. All requests for compensation for Extra Work done on a force account basis, including original receipted bills to verify cost and freight charges for all materials, shall be submitted to the Agency as soon as possible; however, if the required request, invoices, and other documentation are not filed before 90 days have lapsed following final acceptance of the project, the costs associated with such Extra and force account work shall not be reimbursable.

20. PARTIAL PAYMENT ESTIMATES

20.1 A form acceptable to OWNER shall be used when estimating periodic payments due the CONTRACTOR.

20.2 The OWNER may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any approved partial payment estimate to such extent as may be necessary to protect the OWNER from loss on account of:

20.2.1 Defective work not remedied,
20.2.2 Claims filed,
20.2.3 Failure of CONTRACTOR to make payments properly to SUBCONTRACTORs or suppliers,
20.2.4 A reasonable doubt that the Work can be completed for the balance then unpaid,
20.2.5 Damage to another CONTRACTOR,
20.2.6 Performance of Work in violation of the terms of the CONTRACTOR Documents.

20.3 Where Work on unit price items is substantially complete but lacks testing, clean-up and/or corrections, amounts shall be deducted from unit prices in partial payment estimates to amply cover such testing, clean-up and/or corrections.

20.4 When the items in 20.2 and 20.3 are cured, payment shall be made for amounts withheld because of them.

20.5 Payments will not be made that would deplete the retainage nor place in escrow any funds that are required for retainage nor invest the retainage for the benefit of the CONTRACTOR.

21. PROTECTION OF LIVES AND PROPERTY

21.1 In order to protect the lives and health of its employees under the CONTRACTOR, the CONTRACTOR shall comply with all pertinent provisions of the Occupational Safety and Health Administration (OSHA) and any VOSHA (Vermont OSHA) Safety and Health requirements.

21.2 The CONTRACTOR alone shall be responsible for the safety, efficiency, and adequacy of its plant, appliances, and methods, and for any damages, which may result from their failure or their improper construction, maintenance or operation.
The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

22.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

22.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death or his employees;

22.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

22.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

22.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.

22.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall include the OWNER as additional insured and shall contain a provision that coverage afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.

22.3 INSURANCE REQUIREMENTS. Prior to beginning any work the CONTRACTOR shall obtain the following insurance coverage from an insurance company registered and licensed to do business in the State of Vermont and having an A.M. Best insurance rating of at least A-, financial size category VII or greater (www.ambest.com). The certificate of insurance coverage shall be documented on forms acceptable to the OWNER. Compliance with minimum limits and coverage, evidenced by a certificate of insurance showing policies and carriers that are acceptable to the OWNER, must be received prior to the effective date of the Agreement. The insurance policies shall provide that insurance coverage cannot be canceled or revised without thirty (30) days prior notice to the OWNER. Contractor is required to provide evidence of Products/Completed Operations coverage for a period of three years after the project is completed. We would prefer that the requirement of the three year term for Products/Completed Operations coverage be purchased on an up-front basis but will consider receiving an annual certificate of insurance indicating coverage remains in place for the period of three years. Certified copies of any insurance policies may be required. Each policy, with the exception of professional liability (if applicable) and workers compensation, shall name the OWNER as an additional insured for the possible liabilities resulting from the CONTRACTOR's actions or omissions. It is agreed that the liability insurance furnished by the CONTRACTOR is primary and non-contributory for all the additional insured.

The CONTRACTOR is responsible to verify and confirm in writing to the OWNER that:

(a) All SUB-CONTRACTORS, agents or workers meet the minimum coverage and limits plus maintain current certificates of coverage for all SUB-CONTRACTORS, agents or workers. SUB-CONTRACTORS must comply with the same insurance requirements as the CONTRACTOR.

(b) All coverage shall include adequate protection for activities involving hazardous materials.

(c) All work activities related to the agreement shall meet minimum coverage and limits.
No warranty is made that the coverage and limits listed herein are adequate to cover and protect the interests of the CONTRACTOR for the CONTRACTOR’s operations. These are solely minimums that have been developed and must be met to protect the interests of the OWNER.

**GENERAL LIABILITY AND PROPERTY DAMAGE:**

With respect to all operations performed by the CONTRACTOR, SUB-CONTRACTORS, agents or workers, it is the CONTRACTOR’s responsibility to insure that general liability insurance coverage, on an occurrence form, provides all major divisions of coverage including, but not limited to and with limits not less than:

1. Premises Operations
2. Independent CONTRACTORS’ Protective
3. Products and Completed Operations
4. Personal Injury Liability
5. Contractual Liability
6. Broad Form Property Damage
7. Medical Expenses
8. Collapse, Underground and Explosion Hazards

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<td>1. General Aggregate</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>2. Products-Completed/Operations Aggregate</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>3. Personal &amp; Advertising Injury</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>4. Each Occurrence</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>5. Fire Damage (Any one fire)</td>
<td>$250,000</td>
</tr>
<tr>
<td>6. Med. Expense (Any one person)</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

**WORKERS’ COMPENSATION:** With respect to all operations performed, the CONTRACTOR shall carry workers compensation insurance in accordance with the laws of the State of Vermont and ensure that all SUB-CONTRACTORS and SUBCONTRACTORS carry the same workers’ compensation insurance for all work performed by them under this contract. Minimum limits for Employer’s Liability:

(a) Bodily Injury by Accident: $500,000 each accident
(b) Bodily Injury by Disease: $500,000 policy limit, $500,000 each employee

**PROFESSIONAL LIABILITY INSURANCE:**

(a) General. The CONTRACTOR shall carry architects/Owners professional liability insurance covering errors and omissions made during their performance of contractile duties with the following minimum limits:

- $3,000,000 - Annual Aggregate
- $1,000,000 - Per Occurrence

(b) Deductibles. The CONSULTANT is responsible for any and all deductibles.

(c) Coverage. N/A

**AUTOMOBILE LIABILITY:** The CONTRACTOR shall carry commercial automobile liability insurance covering all motor vehicles, including owned, non-owned and hired, used in connection with the agreement. Each policy shall provide coverage with a limit not less than:

- $1,000,000 - Combined Single Limit for each occurrence.
23. SETTLEMENTS OF MISUNDERSTANDINGS: In order to prevent misunderstandings and litigation, it is mutually agreed by all parties that all questions arising under the terms of an Agreement shall first be evaluated by the Local Project Manager. Should a claim be denied in whole or in part by the Local Project Manager, the CONTRACTOR may appeal to the Director of Public Works, except that for claims involving payments, appeals shall be made to the Director of Public Works and the Chief Administrative Officer.

In agreements subjecting costs to final audit, an administrative review regarding the audit will be sent to the CONTRACTOR. Any dispute arising from an administrative decision shall be appealed in writing within thirty (30) days of receipt.

A CONTRACTOR may appeal any determination regarding the contract by filing a notice of appeal by hand delivery or courier to the Local Project Manager. The notice of appeal shall specifically state the grounds of the protest. Within seven (7) calendar days of the notice of appeal, the CONTRACTOR must file the Municipality a detailed statement of the grounds, legal authorities and facts, including all documents and evidentiary statements, in support of the appeal. Evidentiary statements, if any, shall be submitted under penalty of perjury. The CONTRACTOR shall have the burden of proving its appeal by the preponderance of the evidence. Failure to file a notice of appeal or a detailed statement within the applicable period shall constitute an unconditional waiver of the right to appeal the evaluation or qualified process and decisions.

24. AUDIT AND ACCESS TO RECORDS: For all negotiated Contracts, the OWNER, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the CONTRACTOR, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. The CONTRACTOR shall maintain all required records for three years after final payment is made and all other pending matters are closed.

25. If the CONTRACTOR was not required to obtain OWNER approval of the SUBCONTRACTOR(s) prior to Award of the CONTRACT, the CONTRACTOR shall provide written notification to the OWNER within 10 working days of the CONTRACTOR’s intent to employ SUBCONTRACTOR(s) on site. The notification shall list the name, address and telephone number of the SUBCONTRACTOR(s); estimated dollar amounts of SUBCONTRACTOR(s); estimated start and completion dates of the SUBCONTRACTOR(s) work.

26. PUBLIC RECORDS: The CONTRACTOR understands that any and all records related to and acquired by the City, whether electronic, paper, or otherwise recorded, are subject to the Vermont Public Records Act and that the determination of how those records must be handled is solely within the purview of City. The CONTRACTOR shall identify all records that it considers to be trade secrets as that term is defined by subsection 317(c)(9) of the Vermont Public Records Act and shall also identify all other records it considers to be exempt under the Act. It is not sufficient to merely state that the record is proprietary or a trade secret or is otherwise exempt. Particular records, pages or section which are believed to be exempt must be specifically identified as such and must be separated from other records with a convincing explanation and rationale sufficient to justify each exemption from release consistent with Section 317 of Title 1 of the Vermont Statutes Annotated.

27. RELATIONSHIP: The parties agree that the CONTRACTOR is an independent CONTRACTOR. To that end, the CONTRACTOR shall determine the method, details, and means of performing the work, but will comply with all legal requirements in doing so. OWNER shall provide the CONTRACTOR with no specific instructions or training in how to provide the required services, except to the extent required by law or regulation. The CONTRACTOR shall provide its own tools, materials or equipment. The parties agree that neither the CONTRACTOR nor its Principal is an employee of OWNER or any of its departments, agencies, or related entities. The parties also agree that neither the CONTRACTOR nor its Principal is
entitled to any employee benefits from OWNER. CONTRACTOR understands and agrees that it and its Principal have no right to claim any benefits under the Burlington Employee Retirement System, OWNER’S worker’s compensation benefits, health insurance, dental insurance, life insurance or any other employee benefit plan offered by OWNER. The CONTRACTOR agrees to execute any certifications or other documents and provide any certificates of insurance required by OWNER and understands that this contract is conditioned on its doing so, if requested.

The CONTRACTOR understands and agrees that it is responsible for the payment of all taxes on the above sums and that OWNER will not withhold or pay for Social Security, Medicare, or other taxes or benefits or be responsible for any unemployment benefits.

28. GENERAL COMPLIANCE WITH LAWS: The CONTRACTOR shall comply with all applicable Federal, State and local laws, including but not limited to the Burlington Livable Wage Ordinance, the Non-Outsourcing Ordinance and the Union-Deterrence Ordinance and shall provide the required certifications attesting to compliance with these ordinances (see attached ordinances and certifications). CONTRACTOR shall be required to resubmit Livable Wage Ordinance compliance forms annually if the contract period is greater than one year. These forms are due by April 1st of the current year to indicate compliance with the ordinance. CONTRACTOR shall be required to meet the current Livable Wage rates posted by the City annually starting July 1st, regardless of the Livable Wage rate at the time of contract execution.

Provisions of the Agreement shall be interpreted and implemented in a manner consistent with each other and using procedures that will achieve the intent of both parties. If, for any reason, a provision in the Agreement is unenforceable or invalid, that provision shall be deemed severed from the Agreement, and the remaining provisions shall be carried out with the same force and effect as if the severed provisions had never been a part of the Agreement.

This Agreement shall be governed under the laws of the state of Vermont.

29. CIVIL RIGHTS and EQUAL EMPLOYMENT OPPORTUNITY: During performance of the Agreement, the CONTRACTOR will not discriminate against any employee or applicant for employment because of race, age, color, religion, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status or genetic information.

30. TAX REQUIREMENTS: By signing the Agreement, the CONTRACTOR certifies, as required by law under 32 VSA, Section 3113, that under the pains and penalties of perjury, he/she is in good standing with respect to payment, or in full compliance with a plan to pay, any and all taxes due the State of Vermont as of the date of signature on the Agreement.

31. REGISTRATION: The CONTRACTOR agrees to be registered with the Vermont Secretary of State’s office as a business entity doing business in the State of Vermont at all times this contract is effective. This registration must be complete prior to contract execution.

32. WAIVER. No waiver by City of any breach of this Agreement by the CONTRACTOR shall constitute a waiver of any subsequent breach by the CONTRACTOR, and no delay in enforcement of any breach shall be deemed a waiver of that breach.
SUPPLEMENTAL GENERAL CONDITIONS

The following is an index of documents required by the City of Burlington. These documents are made part of the CONTRACT DOCUMENTS. The BIDDERS and CONTRACTOR shall comply with all requirements, provisions, policies and permits contained in the SUPPLEMENTAL GENERAL CONDITIONS.

INDEX:

Livable Wage Ordinance
Outsourcing Ordinance
Union Deterrence Ordinance
Prequalification of Contractors Application
City of Burlington Holidays
EPSC Requirements and Application
Permits Pertaining to Work
NOTE: This ordinance only applies for contracts over $15,000.

ARTICLE VI. LIVABLE WAGES

21-80 Findings and purpose.

In enacting this article, the city council states the following findings and purposes:

(a) Income from full-time work should be sufficient to meet an individual’s basic needs;

(b) The City of Burlington is committed to ensuring that its employees have an opportunity for a decent quality of life and are compensated such that they are not dependent on public assistance to meet their basic needs;

(c) The City of Burlington is committed, through its contracts with vendors and provision of financial assistance, to encourage the private sector to pay its employees a livable wage and contribute to employee health care benefits;

(d) The creation of jobs that pay livable wages promotes the prosperity and general welfare of the City of Burlington and its residents, increases consumer spending with local businesses, improves the economic welfare and security of affected employees and reduces expenditures for public assistance;

(e) It is the intention of the city council in passing this article to provide a minimum level of compensation for employees of the City of Burlington and employees of entities that enter into service contracts or receive financial assistance from the City of Burlington.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-81 Definitions.

As used in this article, the following terms shall be defined as follows:

(a) Contractor or vendor is a person or entity that has a service contract with the City of Burlington where the total amount of the service contract or service contracts exceeds fifteen thousand dollars ($15,000.00) for any twelve (12) month period, including any subcontractors of such contractor or vendor.

(b) Grantee is a person or entity that is the recipient of financial assistance from the City of Burlington in the form of grants, including any contractors or subgrantees of the grantee, that exceed fifteen thousand dollars ($15,000.00) for any twelve (12) month period.
(c) **Covered employer** means the City of Burlington, a contractor or vendor or a grantee as defined above. The primary contractor, vendor, or grantee shall be responsible for the compliance of each of its subcontractors (or of each subgrantee) that is a covered employer.

(d) **Covered employee** means an "employee" as defined below, who is employed by a "covered employer," subject to the following:

1. An employee who is employed by a contractor or vendor is a "covered employee" during the period of time he or she expends on furnishing services under a service contract with the City of Burlington, notwithstanding that the employee may be a temporary or seasonal employee;

2. An employee who is employed by a grantee who expends at least half of his or her time on activities funded by the City of Burlington is a "covered employee."

(e) **Designated accountability monitor** shall mean a nonprofit corporation which has established and maintains valid nonprofit status under Section 501(c)(3) of the United States Internal Revenue Code of 1986, as amended, and that is independent of the parties it is monitoring.

(f) **Employee** means a person who is employed on a full-time or part-time regular basis. In addition, commencing with the next fiscal year, a seasonal or temporary employee of the City of Burlington who works ten (10) or more hours per week and has been employed by the City of Burlington for a period of four (4) years shall be considered a covered employee commencing in the fifth year of employment. "Employee" shall not refer to volunteers working without pay or for a nominal stipend, persons working in an approved apprenticeship program, persons who are hired for a prescribed period of six (6) months or less to fulfill the requirements to obtain a professional license as an attorney, persons who are hired through youth employment programs or student workers or interns participating in established educational internship programs.

(g) **Employer-assisted health care** means health care benefits provided by employers for employees (or employees and their dependents) at the employer’s cost or at an employer contribution towards the purchase of such health care benefits, provided that the employer cost or contribution consists of at least one dollar and twenty cents ($1.20) per hour. (Said amount shall be adjusted every two (2) years for inflation, by the chief administrative officer of the city.)

(h) **Livable wage** has the meaning set forth in Section 21-82.
(i) *Retaliation* shall mean the denial of any right guaranteed under this article, and any threat, discipline, discharge, demotion, suspension, reduction of hours, or any other adverse action against an employee for exercising any right guaranteed under this article. Retaliation shall also include coercion, intimidation, threat, harassment, or interference in any manner with any investigation, proceeding, or hearing under this article.

(j) *Service contract* means a contract primarily for the furnishing of services to the City of Burlington (as opposed to the purchasing or leasing of goods or property). A contract involving the furnishing of financial products, insurance products, or software, even if that contract also includes some support or other services related to the provision of the products, shall not be considered a service contract.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-82 Livable wages required. (FY 19 update)

(a) Every covered employer shall pay each and every covered employee at least a livable wage no less than:

1. For a covered employer that provides employer assisted health care, the livable wage shall be at least thirteen dollars and ninety-five cents ($14.52) per hour on the effective date of the amendments to this article.

2. For a covered employer that does not provide employer assisted health care, the livable wage shall be at least fifteen dollars and eighty-three cents ($16.20) per hour on the effective date of the amendments to this article.

3. Covered employees whose wage compensation consists of more or other than hourly wages, including, but not limited to, tips, commissions, flat fees or bonuses, shall be paid so that the total of all wage compensation will at least equal the livable wage as established under this article.

(b) The amount of the livable wage established in this section shall be adjusted by the chief administrative officer of the city as of July 1 of each year based upon a report of the Joint Fiscal Office of the State of Vermont that describes the basic needs budget for a single person but utilizes a model of two (2) adults residing in a two (2) bedroom living unit in an urban area with the moderate cost food plan. Should there be no such report from the Joint Fiscal Office, the chief administrative officer shall obtain and utilize a basic needs budget that applies a similar methodology. The livable wage rates derived from utilizing a model of two (2) adults residing in a two (2) bedroom living unit in an urban area with a moderate cost food plan shall not become effective until rates meet or exceed the 2010 posted livable wage rates. Prior to May 1 preceding any such adjustment and prior to May 1 of each calendar
year thereafter, the chief administrative officer will provide public notice of this adjustment by posting a written notice in a prominent place in City Hall by sending written notice to the city council and, in the case of covered employers that have requested individual notice and provided contact information to the chief administrative officer, by notice to each such covered employer. However, once a livable wage is applied to an individual employee, no reduction in that employee’s pay rate is permissible due to this annual adjustment.

(c) Covered employers shall provide at least twelve (12) compensated days off per year for full-time covered employees, and a proportionate amount for part-time covered employees, for sick leave, vacation, personal, or combined time off leave.

(Ord. of 11-19-01; Ord. of 5-2-11; Ord. of 6-13-11; Ord. of 10-21-13)

21-83 Applicability.

(a) This article shall apply to any service contract or grant, as provided by this article that is awarded or entered into after the effective date of the article. After the effective date of the article, entering into any agreement or an extension, renewal or amendment of any contract or grant as defined herein shall be subject to compliance with this article.

(b) The requirements of this article shall apply during the term of any service contract subject to the article. Covered employers who receive grants shall comply with this article during the period of time the funds awarded by the City of Burlington are being expended by the covered employer.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-84 Enforcement.

(a) Each service contract or grant covered by this article shall contain provisions requiring that the covered employer or grantee submit a written certification, under oath, during each year during the term of the service contract or grant, that the covered employer or grantee (including all of its subcontractors and subgrantees, if any) is in compliance with this article. The failure of a contract to contain such provisions does not excuse a covered employer from its obligations under this article. The covered employer shall agree to post a notice regarding the applicability of this section in any workplace or other location where employees or other persons contracted for employment are working. The covered employer shall agree to provide payroll records or other documentation for itself and any subcontractors or subgrantees, as deemed necessary by the chief administrative officer of the City of Burlington, within ten (10) business days from receipt of the City of Burlington’s request.
(b) The chief administrative officer of the City of Burlington may require that a covered employer submit proof of compliance with this article at any time, including but not limited to:

1. Verification of an individual employee’s compensation;

2. Production of payroll, health insurance enrollment records, or other relevant documentation; or

3. Evidence of proper posting of notice.

If a covered employer is not able to provide that information within ten (10) business days of the request, the chief administrative officer may turn the matter over to the city attorney’s office for further enforcement proceedings.

(c) The City of Burlington shall appoint a designated accountability monitor that shall have the authority:

1. To inform and educate employees of all applicable provisions of this article and other applicable laws, codes, and regulations;

2. To create a telephonic and electronic accountability system under this article that shall be available at all times to receive complaints under this article;

3. To establish and implement a system for processing employees’ complaints under this article, including a system for investigating complaints and determining their initial credibility; and

4. To refer credible complaints to the city attorney’s office for potential enforcement action under this article.

The designated accountability monitor shall forward to the City of Burlington all credible complaints of violations within ten (10) days of their receipt.

(d) Any covered employee who believes his or her covered employer is not complying with this article may file a complaint in writing with the city attorney’s office within one (1) year after the alleged violation. The city attorney’s office shall conduct an investigation of the complaint, during which it may require from the covered employer evidence such as may be required to determine whether the covered employer has been compliant, and shall make a finding of compliance or noncompliance within a reasonable time after receiving the complaint. Prior to ordering any penalty provided in subsection (e), (f), or (g) of this section, the city attorney’s office shall give notice to the covered employer. The covered employer may request a hearing within thirty (30) days of receipt of such notice. The hearing shall be conducted by a hearing officer appointed by the city attorney’s office, who shall affirm or
reverse the finding or the penalty based upon evidence presented by the city attorney’s office and the covered employer.

(e) The City of Burlington shall have the right to modify, terminate and/or seek specific performance of any contract or grant with a covered employer from any court of competent jurisdiction, if the covered employer has not complied with this article.

(f) Any covered employer who violates this article may be barred from receiving a contract or grant from the city for a period up to two (2) years from the date of the finding of violation.

(g) A violation of this article shall be a civil offense subject to a civil penalty of from two hundred dollars ($200.00) to five hundred dollars ($500.00). All law enforcement officers and any other duly authorized municipal officials are authorized to issue a municipal complaint for a violation of this article. Each day any covered employee is not compensated as required by this article shall constitute a separate violation.

(h) If a complaint is received that implicates any City of Burlington employee in a possible violation of this article, that complaint will be handled through the City’s personnel procedures, not through the process outlined in this article.

(i) Any covered employee aggrieved by a violation of this article may bring a civil action in a court of competent jurisdiction against the covered employer within two (2) years after discovery of the alleged violation. The court may award any covered employee who files suit pursuant to this section, as to the relevant period of time, the following:

1. The difference between the livable wage required under this article and the amount actually paid to the covered employee;

2. Equitable payment for any compensated days off that were unlawfully denied or were not properly compensated;

3. Liquidated damages in an amount equal to the amount of back wages and/or compensated days off unlawfully withheld or fifty dollars ($50.00) for each employee or person whose rights under this article were violated for each day that the violation occurred or continued, whichever is greater;

4. Reinstatement in employment and/or injunctive relief; and

5. Reasonable attorneys’ fees and costs.
(j) It shall be unlawful for an employer or any other person to interfere with, restrain, or deny the exercise of, or the attempt to exercise, any right protected under this article. No person shall engage in retaliation against an employee or threaten to do so because such employee has exercised rights or is planning to exercise rights protected under this article or has cooperated in any investigation conducted pursuant to this article.

(Ord. of 11-19-01; Ord. of 2-17-04; Ord. of 5-2-11; Ord. of 10-21-13)

21-85 Other provisions.

(a) No covered employer shall reduce the compensation, wages, fringe benefits or leave available to any covered employee in order to pay the livable wage required by this article. Any action in violation of this subsection shall be deemed a violation of this article subject to the remedies of Section 21-84.

(b) No covered employer with a current contract, as of the effective date of this provision, with the City of Burlington for the use of property located at the Burlington International Airport may reduce, during the term of that contract, the wages of a covered employee below the livable wage as a result of amendments to this article.

(c) Where pursuant to a contract for services with the city, the contractor or subcontractor incurs a contractual obligation to pay its employees certain wage rates, in no case except as stated in subsection (d) of this section, shall the wage rates paid pursuant to that contract be less than the minimum livable wage paid pursuant to this article.

(d) Notwithstanding subsection (c) of this section, where employees are represented by a bargaining unit or labor union pursuant to rights conferred by state or federal law and a collective bargaining labor agreement is in effect governing the terms and conditions of employment of those employees, this chapter shall not apply to those employees, and the collective bargaining labor agreement shall control.

(e) Covered employers shall inform employees making less than twelve dollars ($12.00) per hour of their possible right to the Earned Income Tax Credit under federal and state law.

(f) The chief administrative officer of the city shall have the authority to promulgate rules as necessary to administer the provisions of this article, which shall become effective upon approval by the city council.

(Ord. of 11-19-01; Ord. of 10-21-13)
21-86 Exemptions.

An exemption from any requirement of this article may be requested for a period not to exceed two (2) years:
(a) By a covered employer where payment of the livable wage would cause substantial economic hardship; and
(b) By the City of Burlington where application of this article to a particular contract or grant is found to violate specific state or federal statutory, regulatory or constitutional provisions or where granting the exemption would be in the best interests of the City.

A covered employer or grantee granted an exemption under this section may reapply for an exemption upon the expiration of the exemption. Requests for exemption may be granted by majority vote of the city council. All requests for exemption shall be submitted to the chief administrative officer. The finance committee of the City of Burlington shall first consider such request and make a recommendation to the city council. The decision of the city council shall be final.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-87 Severability.

If any part or parts or application of any part of this article is held invalid, such holding shall not affect the validity of the remaining parts of this article.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-88 Annual reporting.

On or before April 15 of each year, the city attorney’s office shall submit a report to the city council that provides the following information:
(a) A list of all covered employers broken down by department;
(b) A list of all covered employers whose service contract did not contain the language required by this article; and
(c) All complaints filed and investigated by the city attorney’s office and the results of such investigation.

(Ord. of 10-21-13)
21-89 Effective date.

The amendments to this article shall take effect on January 1, 2014, and shall not be retroactively applied.

(Ord. of 10-21-13)

1

Cross reference—Personnel, Ch. 24.
BURLINGTON’S OUTSOURCING ORDINANCE

ARTICLE VII. OUTSOURCING

21-90 Policy.
It is the policy of the City of Burlington to let service contracts to contractors, subcontractors and vendors who perform work in the United States.

(Ord. of 11-21-05/12-21-05)

21-91 Definitions.

(a) Contractor or vendor. A person or entity that has a contract with the City of Burlington primarily for the furnishing of services (as opposed to the purchasing of goods), including any subcontractors of such contractor or vendor.

(b) Government funded project. Any contract for services which involves any city funds and the total amount of the contract is fifty thousand dollars ($50,000.00) or more. Burlington School Department contracts shall not be considered government funded projects under this article.

(c) Outsourcing. The assigning or reassigning, directly, or indirectly through subcontracting, of services under a government funded project to workers performing the work outside of the United States.

(Ord. of 11-21-05/12-21-05)

21-92 Implementation.

(a) No contract for a government funded project shall be let to any contractor, subcontractor, or vendor who is outsourcing, or causing the work to be performed outside of the United States or Canada.

(b) Prior to the commencement of work on a government funded project a contractor, subcontractor or vendor shall provide written certification that the services provided under the contract will be performed in the United States or Canada.

(Ord. of 11-21-05/12-21-05)

21-93 Exemption.
An exemption from requirements of this article may be authorized by the chief administrative officer based upon a determination that the services to be performed for the government funded project are not available in the United States or Canada at a reasonable cost. Any such exemption decision by the chief administrative officer shall be reported to the board of finance in writing within five (5) days. The board of finance may, if it
should vote to do so, override the exemption decision if such vote occurs within fourteen (14) days of the date of the chief administrative officer’s communication to such board.

(Ord. of 11-21-05/12-21-05)

21-94 Enforcement.

(a) Any contractor, subcontractor or vendor who files false or materially misleading information in connection with an application, certification or request for information pursuant to the provisions of this article or outsources work on a government funded project shall be deemed to be in violation of this article.

(b) A violation of this article shall be a civil offense subject to a civil penalty of from one hundred dollars ($100.00) to five hundred ($500.00). All law enforcement officers and any other duly authorized municipal officials are authorized to issue a municipal complaint for a violation of this article. Each day any violation of any provision of this article shall continue shall constitute a separate violation.

(c) The City of Burlington shall have the right to modify, terminate and or seek specific performance of any contract for a government funded project if the contractor, subcontractor or vendor has not complied with this article.

(Ord. of 11-21-05/12-21-05)

21-95—21-99 Reserved.
BURLINGTON’S UNION DETERRENCE ORDINANCE

ARTICLE VIII. UNION DETERRENCE

21-100 Policy.

It is the policy of the City of Burlington to limit letting contracts to organizations that provide union deterrence services to other companies.

(Ord. of 3-27-06/4-26-06)

21-101 Definitions.

(a) Contractor or vendor. A person or entity that has a contract with the City of Burlington primarily for the furnishing of services (as opposed to the purchasing of goods), including any subcontractors of such contractor or vendor.

(b) Government funded project. Any contract for services which involves any City funds and the total amount of the contract is fifteen thousand dollars ($15,000.00) or more. Burlington School Department contracts shall not be considered government funded projects under this article.

(c) Union deterrence services. Services provided by a contractor, subcontractor or vendor that are not restricted to advice concerning what activities by an employer are prohibited and permitted by applicable laws and regulations, but extend beyond such legal advice to encouraging an employer to do any of the following:

1) Hold captive audience, (i.e., mandatory) meetings with employees encouraging employees to vote against the union;

2) Have supervisors force workers to meet individually with them to discuss the union;

3) Imply to employees, whether through written or oral communication, that their employer may have to shut down or lay people off if the union wins the election;

4) Discipline or fire workers for union activity;

5) Train managers on how to dissuade employees from supporting the union.

(d) Substantial portion of income. For the purposes of this article, substantial portion of income shall mean greater than ten (10) percent of annual gross revenues or one hundred thousand dollars ($100,000.00).
whichever is less.

(Ord. of 3-27-06/4-26-06)

21-102 Implementation.

(a) No contract for a government funded project shall be let to any contractor, subcontractor, or vendor who

1) Advises or has advised an employer to conduct any illegal activity in its dealings with a union.
2) Advertises union deterrence services as specialty services;
3) Earns a substantial portion of its income by providing union deterrence services to other companies in order to defeat union organizing efforts.

(b) Prior to the commencement of work on a government funded project a contractor, subcontractor or vendor shall provide written certification that it has not advised the conduct of any illegal activity, it does not currently, nor will it over the life of the contract provide union deterrence services in violation of this article.

(Ord. of 3-27-06/4-26-06)

21-103 Enforcement.

(a) Any contractor, subcontractor or vendor who files false or materially misleading information in connection with an application, certification or request for information pursuant to the provisions of this article or provided union deterrence services during the life of a contract for a government funded project shall be deemed to be in violation of this article.

(b) The City of Burlington shall have the right to modify, terminate and or seek specific performance of any contract for a government funded project if the contractor, subcontractor or vendor has not complied with this article.(Ord. of 3-27-06/4-26-06)

21-104—21-110 Reserved.
HAZARDOUS MATERIALS AND HISTORIC PRESERVATION

1. If at any time during construction the presence of unanticipated hazardous materials at or proximate to a construction site is detected, the construction CONTRACTOR shall cease work in the affected area and perform the following immediately:

   a. Notify the OWNER verbally and in writing. The OWNER is responsible for notification of the Waste Management Division of the Agency of Natural Resources.

   THE HAZARDOUS MATERIALS SPILLS AND EMERGENCY REPORTING PHONE NUMBER IS Toll Free 1-800-641-5005.

   b. Take all action necessary and appropriate for the protection and safety of the public and persons at or about the site, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying OWNERs and users of adjacent sites and utilities.

2. Actions at the construction site following completion of these steps shall be at the direction of the Waste Management Division. Nothing in this Article shall be construed to require the CONSULTANT and/or the CONTRACTOR to perform work for which adequate compensation has not been contracted for other than to insure that basic measures necessary to protect the health and welfare of workers, residents and abutters are immediately adopted.

3. At construction sites where the presence of contaminated or hazardous materials are suspected to exist and provisions have been made in the Contract Documents for their management, the requirements in the Contract Documents will determine the appropriate actions of the CONTRACTOR. In any event, discovery of contaminated soils require the immediate notification of the OWNER. If sites other than the suspected areas previously delineated in the Contract Documents are discovered, Item 1 above shall apply.

HISTORIC PRESERVATION

1. If at any time during construction, the presence of possible human remains are discovered at or proximate to a construction site, the CONTRACTOR shall cease work in the affected area and immediately contact the local medical examiner or law enforcement official in addition to notifying the OWNER or OWNER’s representative. The CONTRACTOR shall take all action necessary and appropriate for the protection and safety of the public and the site.

   a. Notify the OWNER verbally and in writing. The OWNER is responsible for notification of the Agency of Natural Resources and FED Construction Project Owner

2. If at any time during construction, the presence of unanticipated historic and archeological resources are detected at or proximate to a construction site, the construction CONTRACTOR shall cease work in the affected area, take all action necessary and appropriate for the protection and safety of the public and the site, and inform the following immediately:

   a. Notify the OWNER verbally and in writing. The OWNER is responsible for notification of the Agency of Natural Resources.

   b. Notify the Vermont Division of Historic Preservation at: (802) 828-3050 landline or (802) 477-2517 cell Or (802) 828-3048 landline or (802) 310-0289 cell

3. Actions at the construction site following completion of these steps shall be at the direction of the local medical examiner, law enforcement agent or Historic Preservation Division as appropriate. Nothing in this Article shall be construed to require the CONSULTANT and/or the CONTRACTOR to perform work for
which adequate compensation has not been contracted for other than to insure that basic measures necessary to protect the safety and welfare of the workers and the site.

APPENDIX A – OWNER SUPPLIED DOCUMENTS
DIVISION 1 – GENERAL REQUIREMENTS

01010 Summary of Work
01012 Permits
01570 Traffic Regulations
01740 Guarantees

DIVISION 2 – SITEWORK

02305 Cured-In-Place-Pipe Lining – Sewer and Stormwater Mains
02610A PVC Pressure Pipe – Sewer Force Main

Note: these specifications have been modified to reflect use for a 4” sewer force main.
SECTION 01010
SUMMARY OF WORK

1. GENERAL

1.1 CONTRACT DOCUMENT

A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in all sections.

B. Specification Arrangement
   1. Titles to and arrangements of sections and paragraphs in these Specifications are used merely for convenience and shall not be taken as a correct or complete segregation of the several categories of materials, equipment, and labor, nor as the attempt to outline or define jurisdictional procedures.

1.2 INTENT

A. The entire work provided for in this Request for Proposal shall be constructed and finished in every respect in a good workmanlike and substantial manner. All parts necessary for the proper and complete execution of the work whether the same may have been specifically mentioned or not, or indicated in a manner corresponding with the rest of the work as if the same were particularly described and specifically provided herein. It is not intended that the Contract Drawings shall show every detailed piece of material or equipment, but such parts and pieces as may be in accordance with the best practices and regulatory requirements, even though not shown, shall be furnished and installed. All materials and equipment shall be new unless specifically stated otherwise in these Contract Documents.

1.3 SCOPE

A. The work required by these Specifications shall include furnishing all labor, skill, supervision, tools, equipment and materials, and performing all operations necessary for the properly completed Contract work as described in this Request for Proposal, to the complete satisfaction of the awarding authority and their authorized representatives.

B. Trenchless solutions (Section 02305 below) will need to prove to the Owner that it can span a one inch (1") hole and withstand internal pressure of 70 psi (~1.5x working pressure of 45 psi) without failure.

C. The performed work will need hold 70 psi (~1.5x working pressure of 45 psi) for a period of 2 hours with a loss of pressure not to exceed 5 psi.

1.4 DESCRIPTION OF WORK BY CONTRACTORS (See Section 1.5 for work to be done by Owner)

A. Work to be done by Excavation Contractor for Bid Item #1 includes but is not limited to:
   1. Obtain excavation permit from Burlington Department of Public Works (DPW) located at 645 Pine Street. The excavation inspector is Caleb Manna
(802.865.7562, cmanna@burlingtonvt.gov). This permit form is provided in Section 01012 (Permits) below. Part of this permit includes a traffic control plan. Given the location of this force main close to the edge of public roads, Owner believes requirements of MUTCD can be accomplished with proper signage and two-way traffic can be maintained.

2. Excavate pits and provide shoring as required for access.
3. Bed pipe and backfill pits using suitable material compacted in 12” +/- lifts.
4. Pave pits with 2” of Type II asphalt pavement.

B. Work to be done by Wastewater Contractor for Bid Item #2 includes but is not limited to:
   1. Develop a means for wastewater management while the force main is being renovated. This could include bypass pumping or hauling waste from the wet well to the gravity system on Austin (i.e. pump and dump).
   2. Submit a plan to the Owner for review and approval.

C. Work to be done by Relining Contractor for Bid Item #3 includes but is not limited to:
   1. Clean the force main.
   2. Line the force main.
   3. Pressure test force main using a method approved by the Owner.

1.5 COORDINATED WORK BY OWNER (Water Resources)

A. Work to be done by Owner includes but it not limited to:
   1. Notify nearby residents and other interested parties of construction activities.
   2. Assist Contractors in finding staging areas if necessary.
   3. Operate pump station when necessary.
   4. Coordinate activities with the various Contractors.
   5. Owner may take over wastewater handling as described on the Bid Sheet.

1.6 WORK SEQUENCE

A. Sequence construction to accommodate continued usage of public property.

B. Contractor to sequence operations to conform with any requirements stipulated by permits, ordinances, or the Contract Documents.

C. Prior to performing any work, the Contractor shall submit a detailed flow plan and work schedule for review, coordination and approval by the Owner and Owner.

1.7 CONTRACTOR USE OF PREMISES

A. Confine operations at site to areas permitted by:
   1. Law.
   2. Ordinances.
   3. Permits.

B. Do not unreasonably encumber site with materials or equipment.
C. Do not load structures with weight that will endanger structures.

D. Assume full responsibility for protection and safekeeping of products stored on premises.

E. Move any stored products which interfere with operations of Owner or other contractor(s).

F. Obtain and pay for use of additional storage or work areas needed for operations.

G. Limit use of site for work and storage.
   1. Use of site not to interfere with pedestrian and vehicle access to abutting properties.

2. PRODUCTS
   2.1 None used.

3. EXECUTION
   3.1 None used.

END OF SECTION
SECTION 01012

PERMITS

1. GENERAL

1.1 CONTRACT DOCUMENT

   A. The following permits must be obtained by the Excavation Contractor. The conditions and requirements of these permits are material requirements of the Contract Documents. Bidders shall factor the time and costs of all permit conditions into the Bid. The Contractor shall comply with all permit conditions as they relate to the performance of the work and the delivered project. The Contractor shall not be granted additional compensation to comply with any permit requirement.

1.2 DEPARTMENT OF PUBLIC WORKS EXCAVATION PERMIT

   A. A copy of this Permit application is provided below. The Contractor must actively comply with all of the requirements of this permit.

END OF SECTION
CITY OF BURLINGTON • DEPARTMENT OF PUBLIC WORKS

EXCAVATION PERMIT APPLICATION

TO BE COMPLETED IN FULL BY ALL PERSONS SEEKING AN EXCAVATION PERMIT FOR CONSTRUCTION WITHIN THE CITY LIMITS PURSUANT TO CHAPTERS 27-29 OF THE CODE OF ORDINANCES. (SEE INSTRUCTIONS ON BACK BEFORE COMPLETING)

IDENTIFICATION
Please Print or Type

JOB SITE LOCATION: STREET NAME & NUMBER

PLANS ATTACHED
TRAFFIC CONTROL & FLAGGER INFO
WORK ZONE & SIGNAGE LOCATION
PERDESTRIAN DETOUR PLAN
LANEhiftS

INSURANCE INFORMATION
Insurance listing "The City of Burlington" as Certificate Holder equal to or greater than one million ($1,000,000.00) dollars

Insurance Agents Name

Insurance Policy Number

Bonding Agency Name

Bond Id# & expire date on file Date

DESCRIPTION OF YOUR WORK

CONTRACTORS / HOMEOWNERS
NAME

CONST. START DATE

END DATE

ADDRESS

CITY/TOWN

STATE

ZIP CODE

CONTACT PERSON

DAY PHONE

SIGN HERE

Signature

Title

Date

OFFICE USE ONLY
Upon completion of this form please attach all corresponding documentation and submit to the excavation officer for reviews and approvals.

Respective to the City Code of Ordinances Chapter 27; EXCAVATION PERMITS required for person, firm, or cooperation to disturb the ground or pavement in any street, sidewalk, greenbelt or curb within the city without first obtaining a written permit from the Department of Public Works. Insurance, permit bond and plans submitted shall provide a clear and define description of the project.

<table>
<thead>
<tr>
<th>JOB SITE LOCATION:</th>
<th>Please provide the street name &amp; number where you are requesting to obstruct.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION OF WORK:</td>
<td>This is a description of the work you expect to perform at the job site.</td>
</tr>
<tr>
<td>CONTRACTOR / HOMEOWNER'S NAME AND ADDRESS:</td>
<td>Please complete this section in full.</td>
</tr>
<tr>
<td>DATE CONSTRUCTION WORK WILL BEGIN:</td>
<td>Please indicate the date that you will be on the job and starting the work.</td>
</tr>
<tr>
<td>END DATE:</td>
<td>Please provide the date work will be complete.</td>
</tr>
<tr>
<td>CONTACT PERSON:</td>
<td>The contact person for the project is the person whom the inspectors will contact directly during all times the obstruction permit is issued.</td>
</tr>
<tr>
<td>PERMIT FEES:</td>
<td>Calculations on fees are by square foot respective to BCO Chap 27-30.</td>
</tr>
<tr>
<td>RECEIVING A PERMIT:</td>
<td>Upon the inspectors review and approval meeting all applicable codes and standards in the Code of Ordinances a permit will be issued.</td>
</tr>
<tr>
<td>REQUIRED INSPECTIONS:</td>
<td>The inspector will check off the appropriate boxes indicating the types of inspections required for that project. The required inspections are shown in the left-hand corner of your permit.</td>
</tr>
</tbody>
</table>

| EXCAVATION PERMIT MUST REMAIN ON SITE: | All city issued permits must remain on site and at all-times and readily accessible upon request. Violation of this will cause further action to be taken. |
| SIGNATURE REQUIRED: | Your signature is required as part of completing the form and receiving your work permit. |
| SPECIAL INSTRUCTIONS: | (reserved) |
| PERMIT WALK-IN OFFICE HOURS: | 7:00 AM – 9:30 AM Monday thru Friday |
| | By Appointment: (802) 865-7562 |
| WORKING WITHOUT PERMITS: | Working outside your permit approvals will constitute an immediate Stop Work Order on the project until compliance has been reestablished. |
| | Working without an permits in the City of Burlington will result in receiving a STOP WORK Order on all work taking place over City Right of Way. |
SECTION 01570
TRAFFIC REGULATIONS

1. GENERAL

1.1 DESCRIPTION

A. Work under this section shall include all operations necessary to maintain traffic flow, both vehicular and pedestrian on all roads affected by work done under this Contract, and to maintain access to all properties adjacent to the work. This work shall include, but not be limited to: development of a traffic control plan for city approval; use of uniformed traffic control and flaggers when necessary; and furnishing, erecting, moving, and dismantling barricades, signs, and temporary lighting to inform the general public of hazards existing near the site of the work. An acceptable traffic control plan form is provided at the end of this section.

B. Work under this section shall also include prevention of slippery surface conditions resulting directly from the Contractor’s operations. As part of this section, the Contractor shall also facilitate the passage of public and school buses, plus provide safe access to all bus stops, and notify Green Mountain Transit (802.864.2282) and Property Services with the Burlington School Department (802.864.8453) at least 72 hours in advance where they intend to work and the location of any detours.

1.2 UNIFORMED TRAFFIC CONTROL (IF APPLICABLE)

A. Uniformed traffic control shall mean uniformed law enforcement personnel hired by the Contractor to control traffic either along State highways or at signalized intersections. Cost for Uniformed Traffic Officers (UTO) shall not be paid under a separate pay item but shall be included under other pay items.

B. UTO shall be acceptably attired in uniforms, headgear, and exposed badges that will readily distinguish them from all other employees and shall present a neat appearance to the traveling public at all times. Uniformed traffic control shall include transportation with appropriate emergency lights and equipment.

1.3 FLAGGERS (IF APPLICABLE)

A. Flaggers shall be used by the Contractor to control traffic in all areas of the Project when only one lane is available.

B. Flaggers are personnel hired and paid by the Contractor. Flaggers may or may not be uniformed traffic control officers. Cost for flaggers shall not be paid under a separate pay item but shall be included under other pay items. These flaggers may work in conjunction with uniformed traffic control personnel along State highways.

C. Flaggers or UTO serving as a trained flagger shall wear safety apparel meeting requirements of ISEA “American National Standard of High-Visibility Apparel” and labeled as meeting the ANSI 107-1999 standard performance for Class 2 risk exposure.
Individuals engaged in traffic control shall wear the high-visibility vest with “TRAFFIC CONTROL” visible, without exception so that they are readily distinguished by the traveling public as a person in charge of directing traffic. Acceptable clothing shall include approved headgear and blaze orange vests with reflective stripes.

1.4 GENERAL RESPONSIBILITY

A. The employment of uniformed traffic control officers or flaggers shall in no way relieve the Contractor of any responsibility or liability under the terms of the Contract.

1.5 QUALITY ASSURANCE

A. Work under this section shall be carried out in accordance with Section 630 of the Standard Specifications for Construction, Vermont Agency of Transportation (latest edition) and Manual on Uniformed Traffic Control Devices.

B. Uniformed traffic officers and flaggers shall be trained in traffic control by their employer. All Contractors and Subcontractors providing traffic control personnel to a project shall have an employee certified to train traffic control personnel. All traffic control personnel on a project shall have completed the course in traffic control given by the certified employee representing the specific Contractor or subcontractor providing traffic control personnel for that project.

C. Certification to train traffic control personnel may be obtained by completing one of the following courses.
   1. Vermont Agency of Transportation Flagger Training Course.
   2. Associated General Contractors of New Hampshire Flagger Certification course; or

2. PRODUCTS

2.1 SIGNS

A. Road construction approach signs shall be built, erected, and located in accordance with Vermont Agency of Transportation Standard Drawing E-8 and E-9.

B. Hand held signs shall be a 18” flagman’s paddle with a rigid handle. The STOP face shall have white letters and a white border outlining an octagonal red background. The SLOW face shall have black letters and a black border outlining a diamond-shaped orange background. Red, white, and orange areas shall be reflectorized. Lettering shall be 6” Series C letters per Vermont Agency of Transportation’s Standard Specifications for Construction, and Manual on Uniformed Traffic Control Devices.
3. EXECUTION

3.1 GENERAL

A. Work under this specification shall be done in accordance with approved traffic control plan.

3.2 TRAFFIC CONTROL PERSONNEL RESPONSIBILITY

A. Traffic control personnel shall direct traffic in accordance with subsection entitled Responsibility for Use of Flaggers, Section 107.09, Vermont Agency of Transportation Standard Specifications for Construction and/or these Specifications and Manual on Uniformed Traffic Control Devices.

B. If the traveling public should stop to ask questions, uniformed traffic control personnel or flaggers shall answer them concisely in a courteous manner, but shall remain alert to their duties.

C. Please note that the UTO, under authority granted by law (Title 23 VSA) may direct and control traffic. Suitable examples in work zones might include the direction and control of traffic at intersections where signals are not functioning or are malfunctioning. In these cases, the presence of the blue light may not be suitable or necessary. The wearing of departmentally required and approved reflective garments is required.

D. Flaggers are allowed to stop and release traffic as indicated in the latest MUTCD, Section 6E.04 Flagger Procedures.

3.3 TWO-WAY RADIO COMMUNICATION

A. Traffic control personnel shall use two-way radio communication at all times when two (2) traffic control personnel are used.

END OF SECTION
DAILY TRAFFIC CONTROL PLAN

Date: ____________________ Time: ____________________ Weather: ____________________

LOCATION – (Reference mile points or intersection)

Route: __________ Town: __________ From: __________ To: __________
Posted Speed Limit (MPH): __________ Road Type: __________
Activity: __________ Work Duration: __________

Flaggers required? [ ] YES [ ] NO [ ] * All Flaggers must be Trained *

Prepared By: ____________________ Title: ____________________
Entity Performing Work: ____________________
Address: ____________________
Telephone No: ____________________ Fax No.: ____________________
Project Name: ____________________ Project Number: ____________________

Comments:


WORK DURATION (MUTCD, Part 6, Section 6G.02)

1. Long-term stationary is work that occupies a location more than 3 days.
2. Intermediate-term stationary is work that occupies a location more than one
   daylight period up to 3 days, or nighttime work lasting more than 1 hour.
3. Short-term stationary is work that occupies a location for more than 1 hour within
   a single daylight period.
4. Short duration is work that occupies a location up to 1 hour.
5. Mobile is work that moves intermittently or continuously.

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>Distance Between Signs (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(from MUTCD, Part 6, Table 6H-3)</td>
<td>A</td>
</tr>
<tr>
<td>Urban (low speed) ≤ 40</td>
<td>100</td>
</tr>
<tr>
<td>Urban (high speed) ≥ 45</td>
<td>350</td>
</tr>
<tr>
<td>Rural</td>
<td>500</td>
</tr>
<tr>
<td>Expressway / Freeway</td>
<td>1,000</td>
</tr>
</tbody>
</table>
DAILY TRAFFIC CONTROL PLAN

Temporary Traffic Control Sketch: Refer to Vermont’s Guide to Highway Work Zones – Flip Book and the latest edition of the MUTCD Part 6 for Typical Applications. Sketch to include, but not limited to, showing existing roadways, direction of travel, intersections, placement of traffic control devices, and any other relevant site features (i.e. physical features – large trees ledge outcrops, etc.)
1. GENERAL

1.1 DESCRIPTION

A. The Contractor shall take notice of Section 5 of the General Conditions.

B. In the event that any Work furnished as part of this Contract fails to meet the Performance Specifications herein during the applicable guarantee period and the Work or equipment has been maintained by the Owner in accordance with the manufacturer’s recommendations, the Work shall be repaired, modified, or replaced with equipment acceptable to the Owner at no cost to the Owner so that the Performance Specifications are met. The Contractor shall bear all cost associated with such guarantee work.

2. PRODUCTS

2.1 None used.

3. EXECUTION

3.1 None used.

END OF SECTION
1.1 INTENT

It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube that is either inverted or pulled into the original pipeline/conduit and expanded to fit tightly against said pipeline by the use of water or air pressure. The resin system shall then be cured by elevating the temperature of the fluid (water/air) used for the inflation to a sufficient enough level for the initiators in the resin to effect a reaction. The finished pipe shall be such that when the thermosetting resin cures, the total wall thickness shall be a homogeneous and monolithic felt and resin composite matrix, chemically resistant to withstand internal exposure to domestic sewage or stormwater.

1.2 QUALIFICATIONS

Since sewer or stormwater products are intended to have a 50+ year design life, and in order to minimize the Owner’s risk, only proven products with substantial successful installations and experience will be approved. In order for the CIPP Contractor to be deemed commercially acceptable and approved for this project, they must meet the following criteria:

A. CIPP Product
   1. The CIPP product must have been installed in a minimum of 500,000 linear feet or 2500 manhole to manhole line sections of successful wastewater or stormwater collection systems in North America and must be documented to the satisfaction of the Owner.
   2. The CIPP product shall comply with the latest versions of ASTM F1216 or ASTM F1743, including appendices.
   3. For the CIPP to be considered commercially proven, it shall have been successfully in service in an application similar to this project for a minimum of 10 years and documented to the satisfaction of the Owner.
   4. The lining tube manufacturer shall operate under a quality management system that is third party certified to ISO 9001 or other internationally recognized organization standards. Proof of certification shall be submitted with the Contractor’s bid and required for approval.
   5. If requested, third-party test results supporting the structural properties and long-term performance of the CIPP product shall be submitted for approval, and such data shall be satisfactory to the Owner. No CIPP product will be approved without independent third party testing.

B. Installation Contractor
   1. The Installation Contractor shall be certified by the CIPP product manufacturer to have at least 5 years active experience in the installation of the proposed CIPP product.
   2. The Installation Contractor shall satisfy all insurance, financial and bonding requirements of the Owner, and shall have installed within the United States a minimum of 100,000 lineal feet of the same CIPP product being represented by the bidder.
   3. The Installation Contractor superintendent(s) designated for the project shall have installed a minimum of 50,000 lineal feet and shall have 5 years of installation experience of the same CIPP product being represented by the bidder. This shall be
documented to the Owner’s satisfaction in the form of a resume of work experience detailing scope of work (linear footage and pipe diameters), location of work, and reference contact information for each project listed.

4. The Installation Contractor shall operate under a quality management system that is third party certified to ISO 9001 or equivalent standards. Proof of certification or quality management system shall be submitted with the Installation Contractor’s bid and required for approval.

1.3 STRUCTURAL REQUIREMENTS

A. Each CIPP shall be designed to withstand internal and/or external loads as dictated by the site and pipe conditions. Unless specified differently by the Owner/Engineer in the contract documents, the design thickness of the CIPP shall be derived at using standard engineering methodology as found in ASTM F1216, Appendix X1. The long-term flexural modulus shall not exceed 50 percent of the short-term value for the CIPP resin system and shall be substantiated through third-party testing. The thickness calculations, signed and sealed by a registered professional engineer, shall be submitted to the Owner prior to CIPP installation.

The liner tube shall be a minimum of 3 mm thick with a reinforced scrim as manufactured by Perma-Liner Industries or approved equal.

B. The layers of the finished CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or such that the knife blade moves freely between the layers. If separation of the layers occurs during testing of the field samples, new samples will be cut from the work. Any reoccurrence may be cause for rejection of the work.

C. The enhancement Factor ‘K’ to be used in the CIPP design shall be assigned a value of 7.

D. Long-term testing in general accordance with ASTM D2990 must have been performed for flexural creep of the CIPP pipe material to be installed. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (CIPP Tube and Resin) and general workmanship of the installation and curing as defined within the relevant ASTM standard. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.

E. The CIPP shall meet the following minimum strength requirements:

<table>
<thead>
<tr>
<th>MINIMUM PHYSICAL PROPERTIES</th>
<th>ASTM Method</th>
<th>Polyester System</th>
<th>Filled Polyester System</th>
<th>Vinyl Ester System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength</td>
<td>D790</td>
<td>4,500 psi</td>
<td>4,500 psi</td>
<td>5,000 psi</td>
</tr>
</tbody>
</table>
Flexural Modulus (initial)  D790  250,000 psi  400,000 psi  300,000 psi
Flexural Modulus (50-year) D790  125,000 psi  200,000 psi  150,000 psi

The required CIPP wall thickness shall be based as a minimum on the physical properties in Section 1.3.E above, and in accordance with the design equations in the Appendix X1 of ASTM F1216, and the following design parameters:

- Design Safety Factor (typically used value) = 2.0
- Retention Factor for Long-Term Flexural Modulus to be used in Design = 50% max
- Ovality* (as determined by long-term tests described in Section 1.3.D and approved by the Owner) = %
- Enhancement Factor, K = 7.0
- Groundwater Depth (above invert of pipe) = 0 feet
- Soil Depth (above crown of pipe) = 10 feet
- Soil Modulus (only required for fully deteriorated design conditions) = psi
- Soil Density (only required for fully deteriorated design conditions) = lb/cuft
- Live Load (only required for fully deteriorated design conditions) = AASHTO H20
- Design Condition (partially or fully deteriorated)* = fully

* Based on review of video logs, design conditions of pipeline can be fully or partially deteriorated (See ASTM F1216, Appendix X1). The Owner will be solely responsible for determining pipe conditions and parameters utilized in design.

(1) In the absence of other information and to ensure uniformity in bidding, the following assumptions shall be used: Ovality = 2%; Groundwater Depth at one half soil depth to invert; Soil Modulus = 1000 psi; Soil Density = 120 lb/cuft

1.4 MATERIALS

A. CIPP Tube
1. The CIPP tube shall consist of one or more layers of a flexible needled felt or an equivalent nonwoven or woven material, or a combination of nonwoven and woven materials, capable of carrying resin, withstanding installation pressures and curing temperatures. The CIPP tube should be compatible with the resin system to be used on this project. The material should be able to stretch to fit irregular pipe sections and negotiate bends.
2. The CIPP tube should be fabricated under controlled conditions to a size that, when installed, will tightly fit the internal circumference and the length of the original conduit. Allowances should be made for the longitudinal and circumferential stretching that occurs during placement of the tube. Maximum stretching allowances shall be as defined in ASTM F1216 or ASTM F1743. The Installation Contractor shall verify the lengths in the field before cutting the liner to length. Continuous individual liners can be made over one or more manhole to manhole sections.
3. The CIPP tube shall be uniform in thickness and when subjected to the installation pressures shall meet or exceed the designed wall thickness.
4. Any plastic film applied to the tube on what will become the interior wall of the finished CIPP shall be compatible with the resin system used, translucent enough that the resin is clearly visible, and shall be firmly bonded to the felt material.
5. At time of manufacture, each lot of CIPP tube shall be inspected and certified to be free
of defects. The tube shall be marked for distance at regular intervals along its entire length, not to exceed five feet. Such markings shall also include the CIPP tube Manufacturer's name or identifying symbol.

6. The CIPP tube may be made of single or multiple layer construction where any layer must not be less than 1.5 mm thick. A suitable mechanical strengthener membrane or strip may be placed in between layers where required to control longitudinal stretching.

B. Resin Components
1. The resin system shall be a corrosion resistant polyester, along with a compatible catalyst system. Vinyl ester resin may only be used if called out by the engineer.
2. The resin used shall not contain non-strength enhancing fillers.
3. When combined with the CIPP tube, the resin system shall provide a CIPP that meets the structural requirements of ASTM F1216 or ASTM F1743, the minimum physical properties specified in Section 1.3.E, and those properties which are to be utilized in the design of the lining system for this project.
4. When combined with the CIPP tube, the resin system shall provide a CIPP that complies with the chemical resistance requirements specified in ASTM F1216 or ASTM F1743.

PART 2 - EXECUTION

2.1 GENERAL
A. The Installation Contractor shall deliver the resin impregnated CIPP tube to the site and provide all equipment required to insert and cure the CIPP within the host pipe. The Installation Contractor shall designate a location where the tube will be vacuum impregnated with the resin prior to installation. If requested by the Owner, the Installation Contractor shall notify the Engineer at least 48 hours prior to wet out to allow the Owner's representative to observe the materials and wet out procedure. All procedures to prepare the CIPP for installation shall be in strict accordance with the Manufacturer's recommendations.

B. The CIPP shall be vacuum impregnated with resin not more than 120 hours before the time of installation and stored out of direct sunlight at a temperature of less than 70° F.

2.2 NOTIFICATION AND PREPARATION
A. For sewer relining, the Installation Contractor shall notify all residents affected by this construction at least 24 hours prior to any service disruption affecting their service connection. The Installation Contractor shall make every effort to maintain service usage throughout the duration of the project.
B. The Installation Contractor shall perform cleaning, video, and inspection prior to installation of the CIPP. The Installation Contractor, when required, shall remove all debris from within the pipe that will interfere with the installation of the CIPP. The Owner shall provide a dumpsite for such debris removed during the cleaning operations.
C. It shall be the responsibility of the Installation Contractor to notify the Owner of line obstructions, offset joints or collapsed pipe that will prevent the insertion of the tube or significantly reduce the capacity of the sewer. The Owner, with input from the Installation Contractor shall determine the method of pipe repair required and shall address these concerns on a case-by-case basis.
D. Protruding laterals or services shall be trimmed flush with the inside of the main sewer wall.
prior to installation of the CIPP. Trimming shall not cause damage to the lateral or service beyond the inside face of the main sewer.

E. The Excavation Contractor is responsible for providing traffic control in accordance with Part 6 (Temporary Traffic Control) of the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). A traffic control plan shall be submitted to the Owner for approval prior to arriving on site to do the necessary work. The two page form is provided at the end of this specification section.

F. The Excavation and Relining Contractors are responsible for providing confined space entry training and equipment for their employees in accordance with Standard 1910.146 (permit-required confined space) of the Occupational Safety & Health Administration (OSHA) regulations. An entry permit shall be filled out prior to entering any confined space.

2.3 BYPASS PUMPING
A. The Wastewater Contractor, when required, shall provide for the flow of sewage or stormwater around the section or sections of pipe designated for repair. When possible, the bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow. The Installation Contractor shall furnish all necessary pumping equipment, conduit, etc. to adequately, safely, and environmentally divert sewage flow around the work.
B. When requested by the Owner/Engineer, the Installation Contractor shall submit a general bypass plan.

2.4 TELEVISION INSPECTION (Only if possible in 4” pipe)
A. The Installation Contractor shall provide video equipment capable of properly documenting the conditions as found within the pipe. Lighting for the video camera shall illuminate the entire periphery of the sewer. The camera shall be radial view type capable of viewing 360° within the pipe and shall provide an unobstructed view of the full pipe.
B. The video shall begin with a clear identification of the pipeline location, upstream and downstream manhole designation, and pipe diameter. The video shall provide an accurate length measurement of the entire segment and of the distance to each lateral connection. The Installation Contractor shall pan all lateral connections on both the pre and post-videos.
C. Reverse video set-ups shall be utilized when line obstructions prevent full segment televising from the initial set-up direction.
D. Both a pre-lining and post-lining video shall be submitted to the Owner for approval. The discs shall be clearly and properly labeled.

2.5 INSTALLATION
A. The CIPP shall be installed in accordance with the practices given in ASTM F1216 (for direct inversion installations) or ASTM F1743 (for pulled-in-place installations). The quantity of resin used for the tube’s impregnation shall be sufficient to fill the volume of air voids in the CIPP tube with additional allowances being made for polymerization shrinkage and the loss of any resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used in conjunction with a roller system to achieve a uniform distribution of the resin throughout the CIPP tube.
B. The resin-impregnated CIPP tube shall be installed into the host pipe by methods specified in ASTM F1216 or ASTM F1743 and proven through previous successful installations. The insertion method shall not cause abrasion or scuffing of the CIPP tube. Hydrostatic or air pressure shall be used to inflate the CIPP tube and mold it against the walls of the host pipe. There will be no use of sewage in place of clean water for insertion of the tube, or for the
curing of the liner.
C. Temperature gauges shall be placed between the CIPP tube and the host pipe’s invert position to monitor the temperatures during the cure cycle.

2.6 CURING
A. After the CIPP tube installation is completed, the Installation Contractor shall supply a suitable heat source and recirculation equipment (if required). The equipment shall be capable of delivering hot water or steam throughout the section to uniformly raise the temperature above the temperature required to affect a cure of the resin.
B. The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing heat supply (for water cure) and outgoing heat supply (for steam cure). Water or air temperature in the pipe during the cure period shall be as recommended by the resin Manufacturer.
C. Initial cure shall be deemed to be completed when inspection of the exposed portions of the CIPP appears to be hard and sound and the remote temperature sensor(s) indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin Manufacturer, as modified for the installation process, during which time the recirculation of the heat and/or cycling of the heat exchanger to maintain the temperature is continued.

2.7 COOL DOWN
A. Cool down may be accomplished by the introduction of cool water or air to replace water or pressurized air being relieved. Care shall be taken in the release of the hydrostatic head so that a vacuum will not be developed.
B. For CIPP work on storm pipes, the Contractor shall collect styrene laden water for treatment so that it doesn’t discharge to waters of the state. Collected water can be discharged to a nearby sewer after approval by an authorized city employee.

2.8 FINISH
A. The finished CIPP shall be continuous over the entire length of an insertion run and be as free as commercially practical from visual defects such as foreign inclusions, dry spots, pinholes, and delamination. The CIPP shall be homogeneous, and free of any leakage from the surrounding ground to the inside of the CIPP.
B. Where the CIPP is installed through a manhole uninterrupted, the invert shall be maintained smooth within the manhole, with approximately the bottom half of the CIPP continuous through the length of the manhole. The invert of the manhole shall be shaped and grouted as necessary to support the liner. The cost of this work shall be included in the CIPP unit price.
C. During the warranty period, any defects which will affect the integrity or strength of the CIPP, collect solids or sediment, or reduce hydraulic flow capabilities of the product shall be repaired at the Installation Contractor’s expense in a manner mutually agreed upon by the Owner and the Installation Contractor.

2.9 PRESSURE TEST
A. After all pipe sections have been relined, the force main shall be reconnected with C900 PVC water main pipe and pressure-rated fittings, then pressure tested.
B. While excavated pits are still open, water shall be added to the force main, pressurized to 70 psi at the station and held for 2 hours. Pressure shall not drop more than 5 psi.

2.10 QUALITY ASSURANCE PROCEDURES
A. For every two thousand five hundred (2,500) lineal feet of CIPP installed, two (2) flat plate samples shall be processed and tested. For pipe diameters less than 18 inches, restrained end samples may also be utilized. The CIPP physical properties shall be tested in accordance with ASTM F1216, Section 8, using either allowed sampling method. The flexural properties must meet or exceed the values listed in Section 1.3.E of this specification and the values submitted to the Owner by the Installation Contractor for this project’s CIPP wall design, whichever is greater.

B. Testing shall be completed by an accredited, independent laboratory. Testing results shall be provided to the Owner within seven (7) days of receipt.

C. Wall thickness of samples shall be determined in a manner consistent with paragraph 8.1.2 of ASTM D5813. The minimum wall thickness at any point shall not be less than 87.5% of the specified design thickness calculated in Section 1.3.F of this document.

D. Flexural testing of the collected samples shall be conducted in accordance with ASTM D790, latest version, with only the structural portion of the CIPP being tested.

E. CIPP installation shall be inspected by post-lining video inspection. Variations from true line and grade may be inherent because of the conditions of the original piping. No infiltration of groundwater should be observed. All service entrances should be unobstructed and accounted for.

PART 3 - PAYMENT

Payment for the work included in this section will be in accordance with the unit prices set forth in the proposal for the quantity of work performed. Payments will be made on the work after it has been completed to the Owner’s satisfaction.

When not defined, payment shall be broken down as follows:

A. Mobilization and demobilization shall be paid for as one lump sum amount.

B. Cleaning shall be included in the unit price CIPP cost on the Bid Sheet.

C. Protruding lateral cutouts shall be included in the unit price CIPP cost on the Bid Sheet.

D. CIPP shall be paid per lineal foot of each diameter rehabilitated as measured from center of manhole to center of manhole.

E. Lateral reinstatement shall be included in the unit price CIPP cost on the Bid Sheet.

F. Bypass pumping shall be included in the unit price CIPP cost on the Bid Sheet.

G. Traffic control shall be included in the unit price CIPP cost on the Bid Sheet.

All other incidental costs such as sample testing shall be included in the unit price CIPP cost on the Bid Sheet.

END OF SECTION
SECTION 02610A
PVC PRESSURE PIPE
(SEWER FORCE MAIN)

1. GENERAL

1.1 DESCRIPTION

A. Work Included
   1. Furnish all labor, materials, equipment, and incidentals required to install all exterior
      PVC water pressure pipe and fittings as specified herein and as shown on the
      Contract Drawings.

1.2 QUALITY ASSURANCE

A. Install pipe and fittings to meet the requirements of the State of Vermont, Water Supply
   Rules and the pipe manufacturer.

B. Pipe sizes 4” thru 12” shall conform to AWWA C-900, latest edition.

C. Pipe sizes 14” thru 30” shall conform to AWWA C-905, latest edition.

D. Acceptable PVC pipe shall carry a current certification of the National Sanitation
   Foundation (NSF) as acceptable to use in the transport of potable water.

E. Reject materials contaminated with gasoline, lubricating oil, liquid or gaseous fuel,
   aromatic compounds, paint solvent, paint thinner, and acid solder.

1.3 SUBMITTALS

A. Shop Drawings
   1. Submit manufacturer’s literature, illustrations of PVC water pressure pipe and fittings
      to be used, and recommended installation procedures.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Exercise care in transporting and handling to avoid damage to pipe and fittings.

B. Store materials onsite in enclosures or under protective coverings. Do not allow pipe to
   warp or sag.

C. Do not store materials directly on the ground.

D. Keep inside of pipe and fittings free of dirt and debris.

E. Store gaskets in cool, dark, and clean place protected from grease, oil, sun rays, heat,
   and ozone producing electric motors.
2. PRODUCTS

2.1 PIPE

A. For this project, provide PVC DR-25 (165 psi) pipe conforming to AWWA C-900. Provide standard pipe having integral bell and spigot with elastomeric gasket and cast iron equivalent outside diameter. Provide pipe in standard 20-foot lengths.

2.2 FITTINGS

A. Ductile Iron (D.I.)
   1. All Joints Types
      a. ANSI A21.10 (latest revision).
   2. Pressure Rating
      a. 350 psi, all sizes.
   3. D.I. mechanical joint fittings (D.I./M.J.) for buried pipe fittings shall be D.I.M.J. conforming to AWWA C-153. All fittings shall be bituminous coated, inside and outside.

2.3 JOINT LUBRICATION

A. For PVC (Polyvinyl Chloride) Water Pipe and Fittings
   1. Push-On Gasketed Type Joint
      a. As recommended by the manufacturer of pipe and fittings.

3. EXECUTION

3.1 INSPECTION

A. Any defective pipe, fittings, or gaskets shall be rejected.

B. Examine Areas to Receive Piping For:
   1. Defects that adversely affect execution and quality of work.
   2. Deviations beyond allowable tolerance for piping clearances.

C. Pipe to be Kept Clean
   1. All foreign materials and dirt shall be removed from the inside of the pipe and fittings before they are lowered into their trench position and then shall be kept clean during and after laying.

3.2 LAYING AND JOINING PIPE

A. Laying of PVC Water Pipe and Fittings
   1. Pipe shall be installed with full support for the entire length. Blocking of pipe installed in the ground will not be permitted.
2. Pipe shall be laid with bell ends facing upgrade and laying shall start at the lower end and shall proceed upward.

3. Every precaution shall be taken to prevent foreign materials from entering the pipe while it is being placed in the trench. If the pipe-laying crew cannot put the pipe and fittings into the trench and in place without getting foreign materials into it, the Engineer shall require that before lowering the pipe into the trench, a heavy, tightly woven canvas bag of suitable size be placed over each end and left in place until the connection is to be made with the adjacent pipe.

4. At times when pipe-laying is not in progress, the open ends of installed pipe shall be closed by a watertight plug.

5. Unsuitable conditions for laying pipe
   a. No pipe shall be laid in water or when the trench conditions or the weather are unsuitable for such work. No trench water shall be permitted to enter the pipe.

B. Joining of PVC Water Pipe and Fittings
   1. Join in conformance with pipe and fitting manufacturer's recommendations.

3.3 INSTALLATION, PVC WATER PIPE

A. General
   1. All pipe shall be carefully laid to grade and alignment. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and to bring the inverts continuously to the required grade. In order to insure a minimum amount of movement or disturbance, no more than two (2) lengths of pipe may be laid before backfilling to a minimum of 12” over the top of pipe.
   2. Bell holes shall be dug to provide ample space for making joints and to allow the pipe to have uniform bedding support along its entire length. After laying each length to the line and grade shown, the trench shall be backfilled to the midpoint of the pipe and the trench hand-compacted with special care taken to ensure that compacted materials is placed under the haunches of the pipe. No walking upon or working over the pipes after it is laid will be permitted until it is covered with earth to a depth of at least 12” except as may be necessary in tamping the earth and backfilling. All openings to the pipeline shall be satisfactorily protected to prevent the entrance of dirt, water, or other foreign matter.
      a. No blocking shall be used.
   3. Pipe shall be installed in dry trench conditions. The Contractor is responsible for employing proper dewatering methods and equipment. No trench water shall be permitted to enter the new pipe.

B. Bedding
   1. Carefully bring the bedding material to grade so as to provide a uniform support for the pipe and so as to avoid differential settlement of the pipe.

C. Compaction
   1. Non-roadway: Minimum of 90% standard proctor density to a 6” compacted depth.
   2. Roadway: Minimum of 95% standard proctor density to a 6” compacted depth.
      a. Refer to the Contract Drawings for the Trench Details.
3. In trenches which have materials of fine grains and in condition where migration of trench wall material into bedding material can be anticipated, either wide trench construction or well graded bedding material without voids shall be used as determined by the Engineer.

END OF SECTION
- 45 psi pressure at station
- emergency storage ~5000 gals

- tie into gravity sewer (~2220 ft)
- multiple breaks here
Pictures of Force Main from 2013 Break

Reason for break: improper bedding (rock against pipe)
### Historical Pump Station Data

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<tr>
<th>MONTH</th>
<th>PRECIP INCHES</th>
<th>AVE LAKE ELEV. (ft)</th>
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<tr>
<td>Jan</td>
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Note: Higher correlation between Lake level and flow (R² = 0.63) than precipitation and flow (R² = 0.13).

![South Cove PS Flows Graph](image-url)

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<thead>
<tr>
<th>Date</th>
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<th>Min. Emergency Storage</th>
<th>Average Fill Time</th>
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<td>5/2/2018</td>
<td>14.1 GPM</td>
<td>5000 gallons</td>
<td>5.9 hours</td>
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