

PHONE 802-674-6526
FAX 802-674-6245



GENERAL CONTRACTORS

GRAVEL • SAND • LOAM

BRIDGE CONSTRUCTION AND REPAIRS • EXCAVATIONS AND WATER CONTROL • CONCRETE FOUNDATIONS AND STRUCTURES

P.O. BOX 86, 3103 US RT5 SOUTH
WINDSOR, VERMONT 05089-0086

CERTIFICATE OF VOTE

The UNDERSIGNED, Secretary of Miller Construction, Inc. a Vermont corporation, hereby certifies that at a meeting of said corporation, duly called and held on the 1st day March 2014, the following votes were unanimously passed.

VOTED: That Miller Construction, Inc., a corporation organized and existing under the laws of the State of Vermont, and having a place of business and registered office in Windsor in the State of VT, desire to transact business in the State of Vermont, in conformity with the laws thereof, and further,

VOTED: That Roger C. Gilman, as General Manager, or David A. Hurst, as President, or Paul Holloway, as Estimator or Anna Benware, as Secretary, each be and hereby is authorized, empowered and instructed to execute and deliver any and all documents necessary to transact any all business in said State of Vermont (Brookfield BRF FLBR (2)) and, further,

VOTED: That all acts and things theretofore done and all documents and instruments heretofore executed on behalf of this corporation in the transaction of its business with the State of Vermont are hereby ratified, approved and confirmed.

IN WITNESS WHEREOF, I have set my hand and affixed the seal of said corporation on this 1st day of March 2014.


Anna Benware, Secretary

RENTAL EQUIPMENT



STATE OF VERMONT

CONTRACT BOND Bond No. 106023807

KNOW ALL MEN BY THESE PRESENTS, That we Miller Construction, Incorporated
3103 US 5 South, P.O. Box 86, Windsor, VT 05089-0086

as Principal, and Travelers Casualty and Surety Company of America
Agency: P.O. Box 511, Concord, NH 03302-0511

as Surety, are held and firmly bound unto the State of Vermont, as Obligee, in the penal sum of Two Million Three Hundred Eighty Six Thousand Seventy Three and 15/100ths (\$ 2,386,073.15), good and lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a certain written contract with the above named Obligee, the State of Vermont dated the 19th day of March A. D. 20 14 for the construction of a certain project in the State of Vermont known as Brookfield BRFLBR (2) which contract is hereby referred to and made a part hereof as fully and to the same extent as if set forth at length herein:

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, if the above bounden Principal and his subcontractors and his or their agents and servants shall well and truly keep, do and perform, each and every, all and singular the matters and things in said contract set forth and specified to be by the said Principal kept, done and performed at the time and in the manner in said contract specified and shall pay over, make good and reimburse the State of Vermont all loss or losses and damage or damages which the above named Obligee, the State of Vermont, may sustain by reason of failure or default on the part of the Principal or his subcontractors, or his or their agents and servants, to fully carry out the terms of said contract, then this obligation shall be void; otherwise, to be and remain in full force and effect.

In Witness Whereof we hereunto set our hands and seals this 13th day of March A. D. 20 14.

In Presence of (TWO WITNESSES REQUIRED)

Kristal Delatours
Anna M. Benner
as to Principal

Miller Construction, Incorporated
Name of Corporation, Co-partnership or Individual
Paul J. Alling L. S.
Authorized Signature

V. P.
Title

(TWO WITNESSES REQUIRED)

Cary S. Chapin
Christine M. Hosmer
Christine M. Hosmer
as to Surety.

Travelers Casualty and Surety Company of America
Bonding Company
William Ver Planck L. S.
Authorized Signature

William Ver Planck, Attorney-In-Fact
Title

Compliance Bond

CONTRACT BOND

Miller Construction, Incorporated

3103 US 5 South, P.O. Box 86

Windsor, VT 05089-0086

Principal

Travelers Casualty and Surety Company of America

Agency: P.O. Box 511

Concord, NH 03302-0511

Surety.

and

STATE OF VERMONT

Obligee.

Date

3/19 2014

Amount \$ 2,386,073.15

Approved

3/19

2014

Secretary of Transportation or
Duly Authorized Agent



CONTRACT BOND
STATE OF VERMONT Bond No. 106023807

KNOW ALL MEN BY THESE PRESENTS, That we Miller Construction, Incorporated
3103 US 5 South, P.O. Box 86, Windsor, VT 05089-0086

as Principal, and Travelers Casualty and Surety Company of America
Agency: P.O. Box 511, Concord, NH 03302-0511

As Surety, are held and firmly bounden, unto the Secretary of Transportation for the State of Vermont, and his successors in office, as Obligees, in the penal sum of Two Million Three Hundred Eighty Six Thousand Seventy Three and 15/100ths (\$ 2,386,073.15), good and lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a certain written contract with the State of Vermont, dated the day of March 19 A. D. 2014 for the construction of a certain project in the State of Vermont known as Brookfield BRFLBR (2) which contract is hereby referred to and made a part hereof as fully and to the same extent as if set forth at length herein:

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, if the above bounden, Principal shall pay, settle, liquidate and discharge the claims of all creditors for material, merchandise, labor, rent, hire of vehicles, power shovels, rollers, concrete mixers, tools and other appliances, professional services, premiums and other services used or employed in carrying out the terms of said contract between said Principal and the State of Vermont, and shall pay all taxes, both State and municipal, and contributions to the Vermont Commissioner of Employment and Training, accruing during the term of performance of said contract, this agreement to make such payment being in compliance with the requirements of 19 Vermont Statutes Annotated, Section 10(9), as amended, to furnish security thereunder, and being in fact such security, then this obligation shall be void; otherwise, to be and remain in full force and effect.

In Witness Whereof we hereunto set our hands and seals this 13th day of March A. D. 2014.

In Presence of (TWO WITNESSES REQUIRED)

Kristal DeBateaux
Chris M. Benner
as to Principal

Miller Construction, Incorporated
Name of Corporation, Co-partnership or Individual
Paul J. Murray L. S.
Authorized Signature

V.P.

Title

(TWO WITNESSES REQUIRED)

Cary S. Chapin
Christine M. Hosmer
Christine M. Hosmer
as to Surety.

Travelers Casualty and Surety Company of America
Bonding Company
William Ver Planck L. S.
Authorized Signature

William Ver Planck, Attorney-In-Fact
Title

Labor & Materials Bond

CONTRACT BOND

Miller Construction, Incorporated

3101 US 5 South, P.O. Box 86

Windsor, VT 05089-0086

Principal.

Travelers Casualty and Surety Company of America

Agency: P.O. Box 511

Concord, NH 03302-0511

Surety.

and

STATE OF VERMONT

Obligee.

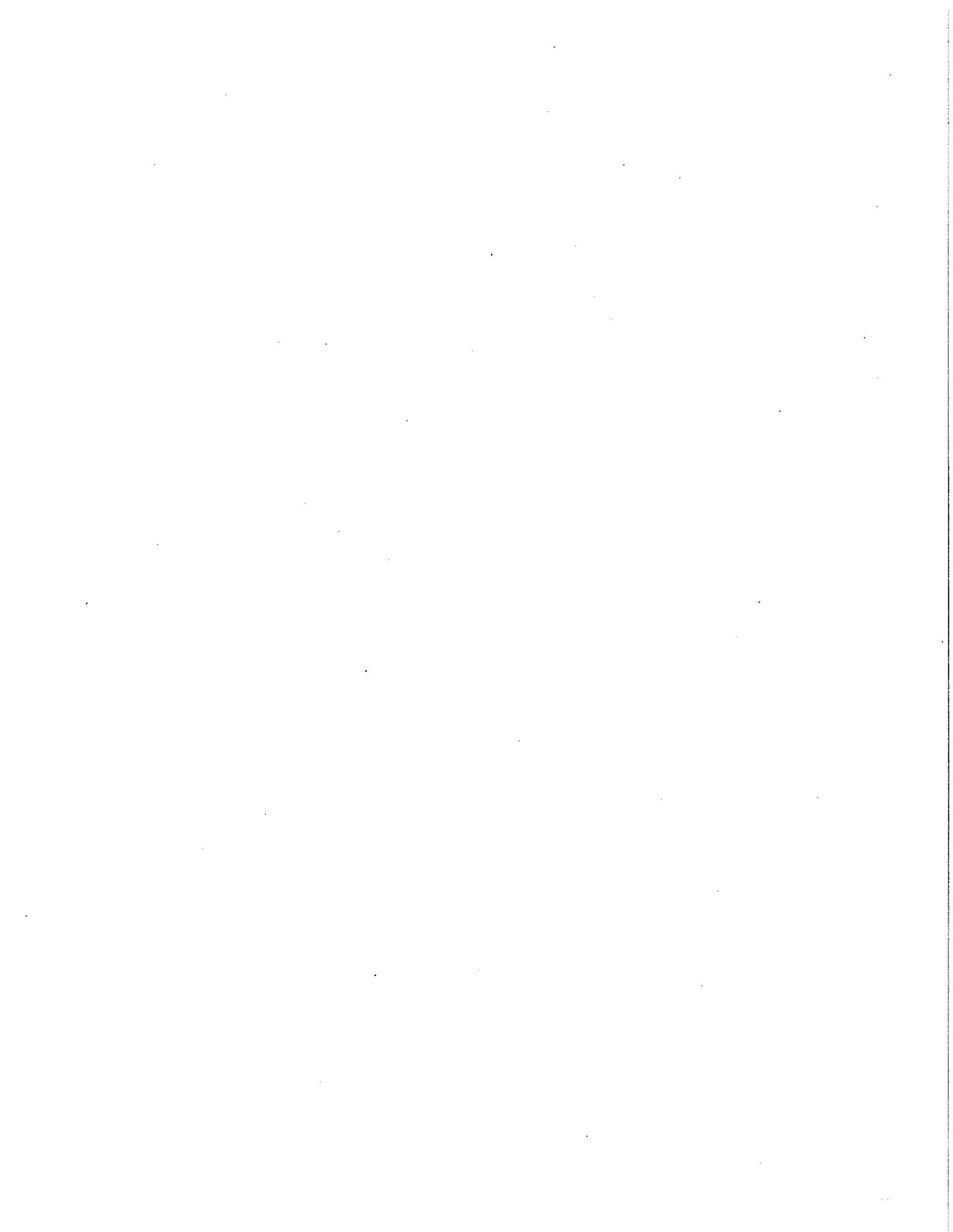
Date 3/19 2014

Amount, \$ 2,386,073.15

Approved 3/19 2014



Secretary of Transportation or
Duly Authorized Agent



SCHEDULE OF INSURANCE RATES ON EXTRA WORK

APPLICABLE TO THE Brookfield BRFLBR (2) Project PROJECT

To the Secretary of
Transportation
Montpelier, Vermont

Policy Rate Dates WC-Travelers
Casualty & Surety
Co. 6/30/13-6/30/14
GL-The Charter
Oak Fire Ins. Co.
6/30/13-6/30/14

In connection with the contract for the above project, I/We submit herewith the following classification of work and the rates of insurance applicable to extra work performed and accepted on said project:

Workmen's Compensation

Classification No.	<u>5222</u>	Rate	<u>11.92</u>
Classification No.	<u>5222U</u>	Rate	<u>14.30</u>
Classification No.	<u>9534</u>	Rate	<u>12.75</u>

General Liability

Classification No.	<u>69861</u>	Rate	<u>25.435</u>
Classification No.	<u>69862</u>	Rate	<u>1.96</u>
Classification No.	<u> </u>	Rate	<u> </u>
Classification No.	<u> </u>	Rate	<u> </u>

Automobile Liability

Classification No.	<u>Light vehicles</u>	Rate	<u>346.00</u>
Classification No.	<u>Medium trucks</u>	Rate	<u>556.00</u>
Classification No.	<u>Heavy trucks</u>	Rate	<u>841.00</u>
Classification No.	<u>Extra Heavy trucks</u>	Rate	<u>1020.00</u>
Classification No.	<u>Trailers</u>	Rate	<u>36.00</u>

<u>Federal Social Security Act</u>	Rate	<u>7.65%</u>
<u>Federal Unemployment Insurance</u>	Rate	<u>.6%</u>
<u>Vermont Unemployment Compensation Act</u>	Rate	<u>8.4%</u>

All items of insurance as above on extra work performed and accepted shall be allowed on the final estimate as per the Vermont Standard Highway and Bridge Specifications.

3/13/14
Date

Miller Construction Inc.
Name of Corporation, Co-Partnership or Individual
Paul Holloway, Vice President

Name and Title of Individual Signing,
Contract
Windsor
Town or City
Vermont
State



State of Vermont
Agency of Transportation
Contract Administration
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us/conadmin

[phone] 802-828-2641
[fax] 802-828-5545
[ttd] 800-253-0191

CA-95

TO: CONTRACT ADMINISTRATION
MONTPELIER, VERMONT

RE: Brookfield BRFLBR (2)

I hereby certify that I have received and have in my possession a copy of the STANDARD SPECIFICATIONS FOR CONSTRUCTION, dated 2011.

Respectfully,

Miller Construction Inc.

Name of Corporation, Co-Partnership or Individual

Paul Holloway

Name of Individual Signing the Contract


Signature of Individual Signing the Contract

Vice President

Title of Individual Signing the Contract

(Street) 3103 US Route 5 South

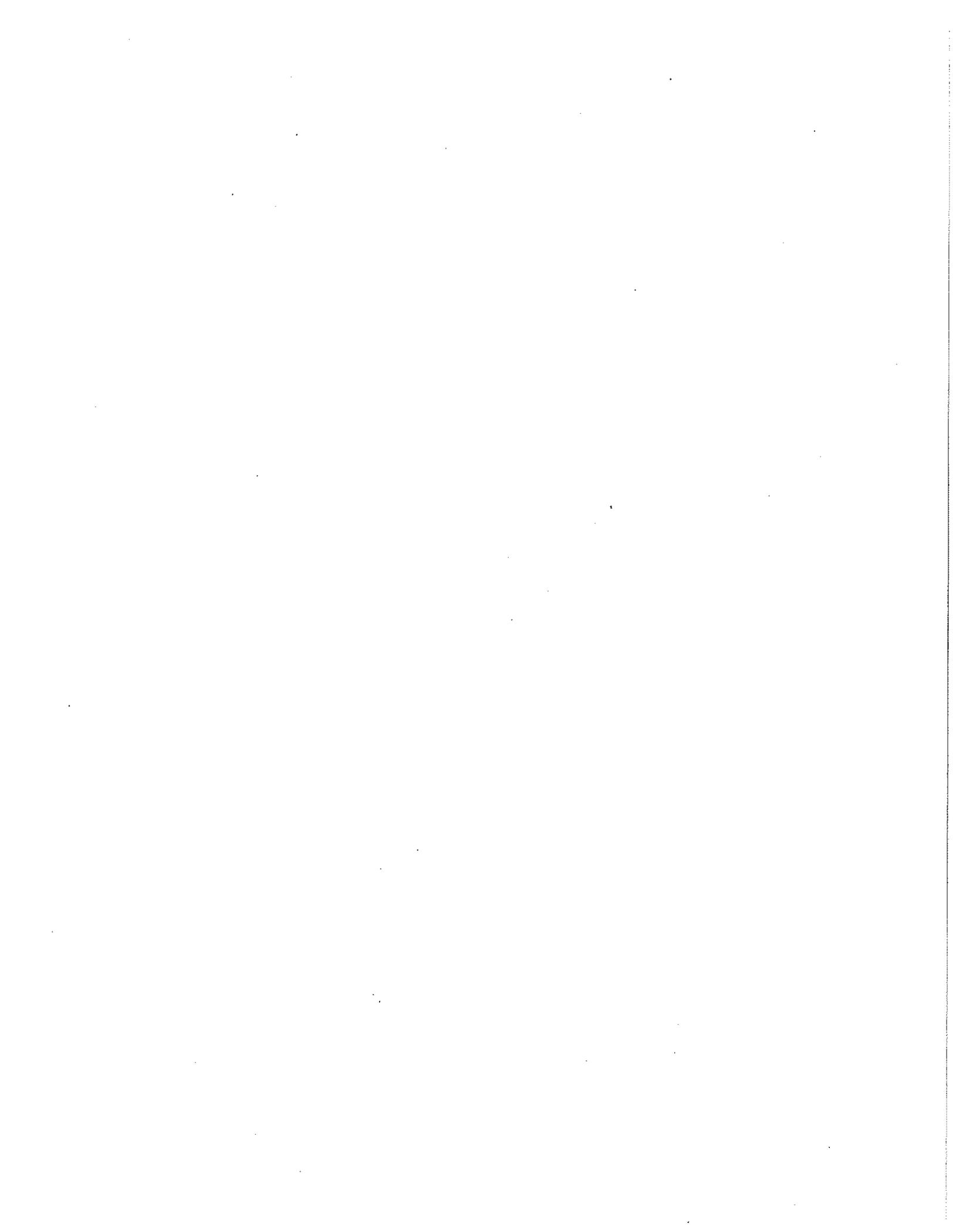
(Town or City) Windsor

(State) Vermont

(Date) 3/13/14

To be filled
in completely
by Contractor

To be filled
in completely
by Contractor





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
3/11/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER THE ROWLEY AGENCY INC. 139 Loudon Road P.O. Box 511 Concord NH 03302-0511	CONTACT NAME: Christine Holman, CPCU, CIC	
	PHONE (A/C No. Ext): (603) 224-2562	FAX (A/C No.): (603) 224-8012
	E-MAIL ADDRESS: cholman@rowleyagency.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED Miller Construction Inc. P.O. Box 86 Windsor VT 05089	INSURER A: Travelers	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES CERTIFICATE NUMBER: 13-14 Miller REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC		DTCO2572L87A PER PROJECT AGGREGATE ENDORSEMENT APPLIES WHEN REQUIRED BY WRITTEN CONTRACT	6/30/2013	6/30/2014	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/POP AGG \$ 2,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS		DT8102572L87ACOF13	6/30/2013	6/30/2014	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000		DTSMCUP2572L87A	6/30/2013	6/30/2014	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	DTEUB4436L35612 3A STATES: NH, VT NO EXCLUDED OFFICERS	6/30/2013	6/30/2014	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
A	LEASED/RENTED EQUIPMENT RIGGERS LIABILITY		QT6603083B737 QT6603083B737	6/30/2013 6/30/2013	6/30/2014 6/30/2014	\$ 500,000 \$ 300,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
Project: Brookfield BRF FLBR (2)

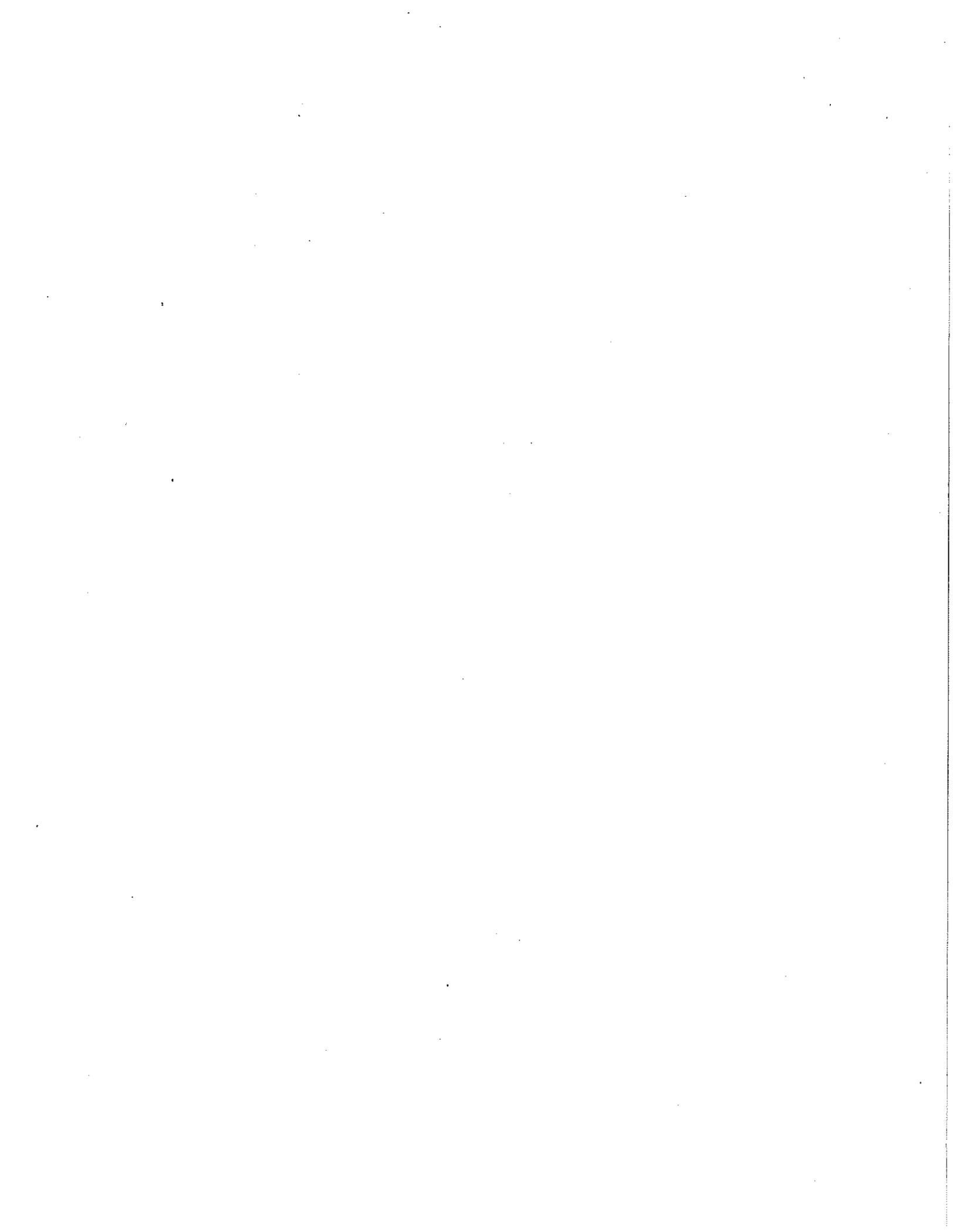
CERTIFICATE HOLDER

State of Vermont
Agency of Transportation
Construction-Dewey Building
One National Life Dr.
Montpelier, VT 05633

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
C Holman, CPCU, CIC/H *Christine Holman*





POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 226027

Certificate No. 005521345

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Daniel E. Church, Bruce H. Langley, William Ver Planck, Paula J. Cantara, John P. Timmeny, John T. Whiting, Michael P. O'Brien, Christine M. Hosmer, and Ryan Stevens

of the City of Concord, State of New Hampshire, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 7th day of June, 2013.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

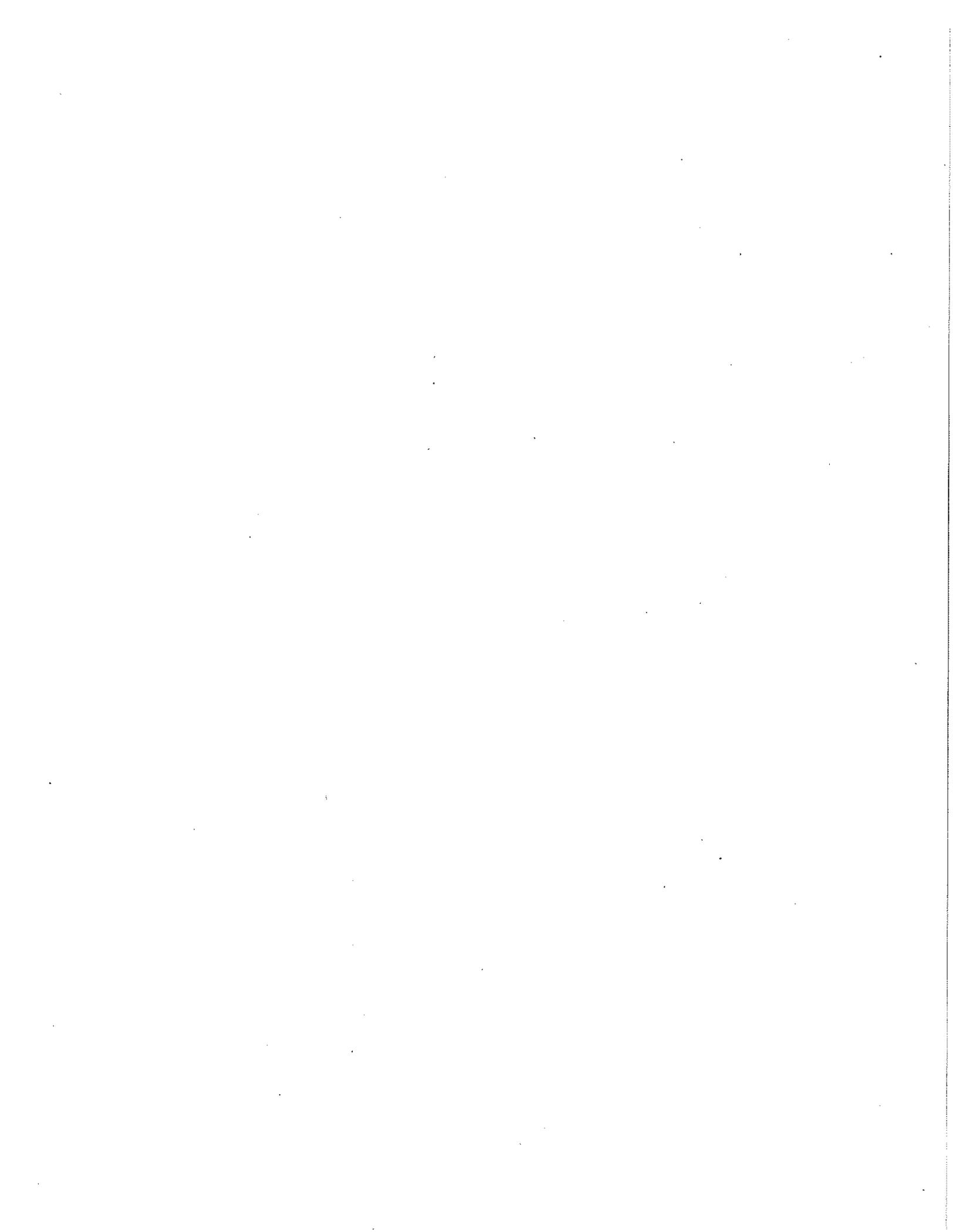
By: [Signature]
Robert L. Raney, Senior Vice President

On this the 7th day of June, 2013, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public



VERMONT

CA-111-A

Project
Brookfield BRFLBR (2)

VERMONT
AGENCY OF TRANSPORTATION
2011 Standard Specifications for Construction

CONTRACT AGREEMENT

Miller Construction, Incorporated
3103 US 5 South
PO Box 86
Windsor, VT 05089

Required Contract Provisions for Federal-Aid Construction
Standard Federal EEO Specifications
Vermont Agency of Transportation Contractor Workforce Reporting Requirements
Workers' Compensation; State Contracts Compliance Requirement
General Special Provisions dated July 2, 2013
Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants
Special Provisions
Vermont Minimum Labor & Truck Rates
Disadvantaged Business Enterprise (DBE) Policy Contract Requirements
US Department of Labor Davis – Bacon Wage Rates
Asphalt Price Adjustment Provisions dated April 6, 2010
Lakes and Ponds Permit #BR00-0023 dated June 19, 2013
Army Corps of Engineers Category 1 Self-Verification Form
Army Corps of Engineers General Permit #NAE-2012-1167 dated December 6, 2012
Certification for Federal-Aid Contracts
Contractor's EEO Certification
Contract CA-111-B Form
Schedule of Items
Contractor's Signature Page

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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

ATTACHMENTS

Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

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

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

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

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

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

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

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

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

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

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

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
 - a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
 - b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."
2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.
3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.
 - d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means:
4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.
 - b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals; the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.
 - c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.
5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
 - b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
 - c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
 - d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.
6. **Training and Promotion:**
- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
 - c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
 - d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.
7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:
- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
 - b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
 - c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.
8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
9. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
 - b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
10. **Assurance Required by 49 CFR 26.13(b):**
- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

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

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

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

- (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

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

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

1. Minimum wages

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

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

- b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii) The classification is utilized in the area by the construction industry; and
 - (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.
- (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

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

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

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

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

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

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

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

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

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

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

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

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

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
 - (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

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

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:
 - a. To the extent that qualified persons regularly residing in the area are not available.
 - b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.
 - c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.
2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.
3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.
4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.
5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.
6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a. "Covered Area" means the geographical area described in the solicitation from which this contract resulted.
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.
 - c. "Employer Identification Number" means the Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

A Minority Group Member is:

...American Indian or Alaskan Native

consisting of all persons having origins in any of the original people of North American and who maintain cultural identification through tribal affiliations or community recognition.

...Black

consisting of all persons having origins in any of the Black racial groups of Africa.

...Asian or Pacific Islander

consisting of all persons having origins in any of the original people of the Far East, Southeast Asia, the Indian Sub-Continent or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippines and Samoa.

...Hispanic

consisting of all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin.

...Cape Verde an

consisting of all persons having origins in the Cape Verde Islands.

...Portuguese

consisting of all persons of Portuguese, Brazilian or other Portuguese culture or origin.

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000.00 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in the Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontract participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to make good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in Paragraphs 7a through p of these specifications. The goals set for the Contractor in the solicitation from which this contract resulted are expressed as percentages in the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minority or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organizations' responses.

- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notifications to the Regional Director when the union or unions, with which the Contractor has a collective bargaining agreement, have not referred to the Contractor a minority person or woman sent by the Contractor or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under Paragraph 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, Supervisors etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, and providing written notification to, and discussing the Contractor's EEO policy with, other Contractors and subcontractors with whom the Contractor anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notifications to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Paragraph 7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under Paragraph 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under-utilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.
11. The Contractor shall not enter into any subcontract with any person for firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, terminations and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in Paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application or requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL
EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

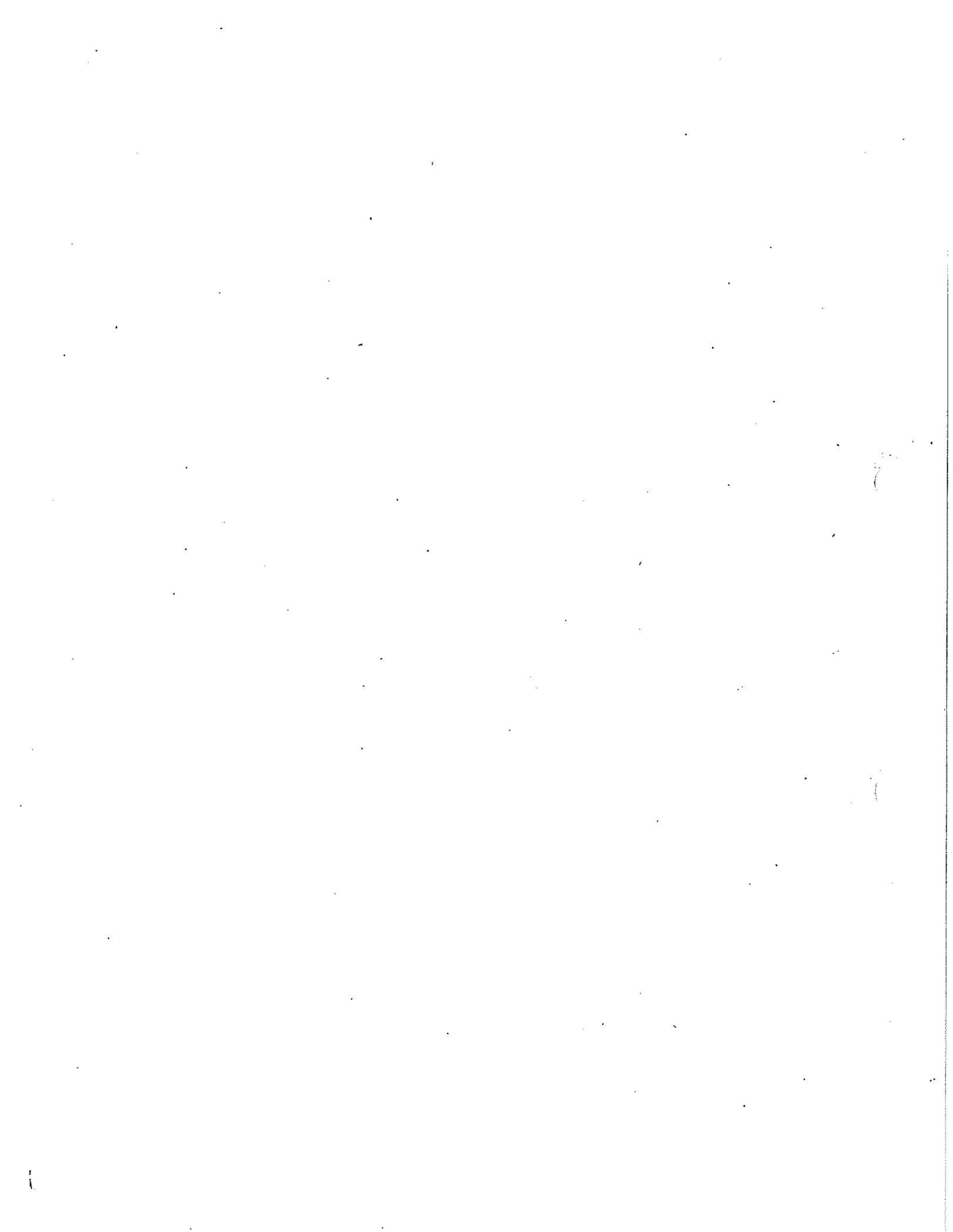
1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Economic Areas	Timetables	Goals for Minority participation for each trade (%)	Goals for Female Participation in each trade (%)
Entire State of Vermont:			
<u>Vermont</u> 003 Burlington, VT Non-SMSA Counties NH Coos; NH Grafton; NH Sullivan; VT Addison; VT Caledonia; VT Chittenden; VT Essex; VT Franklin; VT Grand Isle; VT Lamoille; VT Orange; VT Orleans; VT Rutland; VT Washington; VT Windsor	Indefinite	0.8	6.9
<u>Connecticut (Mass)</u> 006 Hartford - New Haven Springfield, CT-MA Non-SMSA Counties CT Litchfield; CT Windham; MA Franklin; NH Cheshire; VT Windham	Indefinite	5.9	
<u>New York</u> 007 Albany - Schenectady - Troy, NY Non-SMSA Counties NY Clinton; NY Columbia; NY Essex; NY Fulton; NY Greene; NY Hamilton; NY Schoharie; NY Warren; NY Washington; VT Bennington	Indefinite	2.6	

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

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

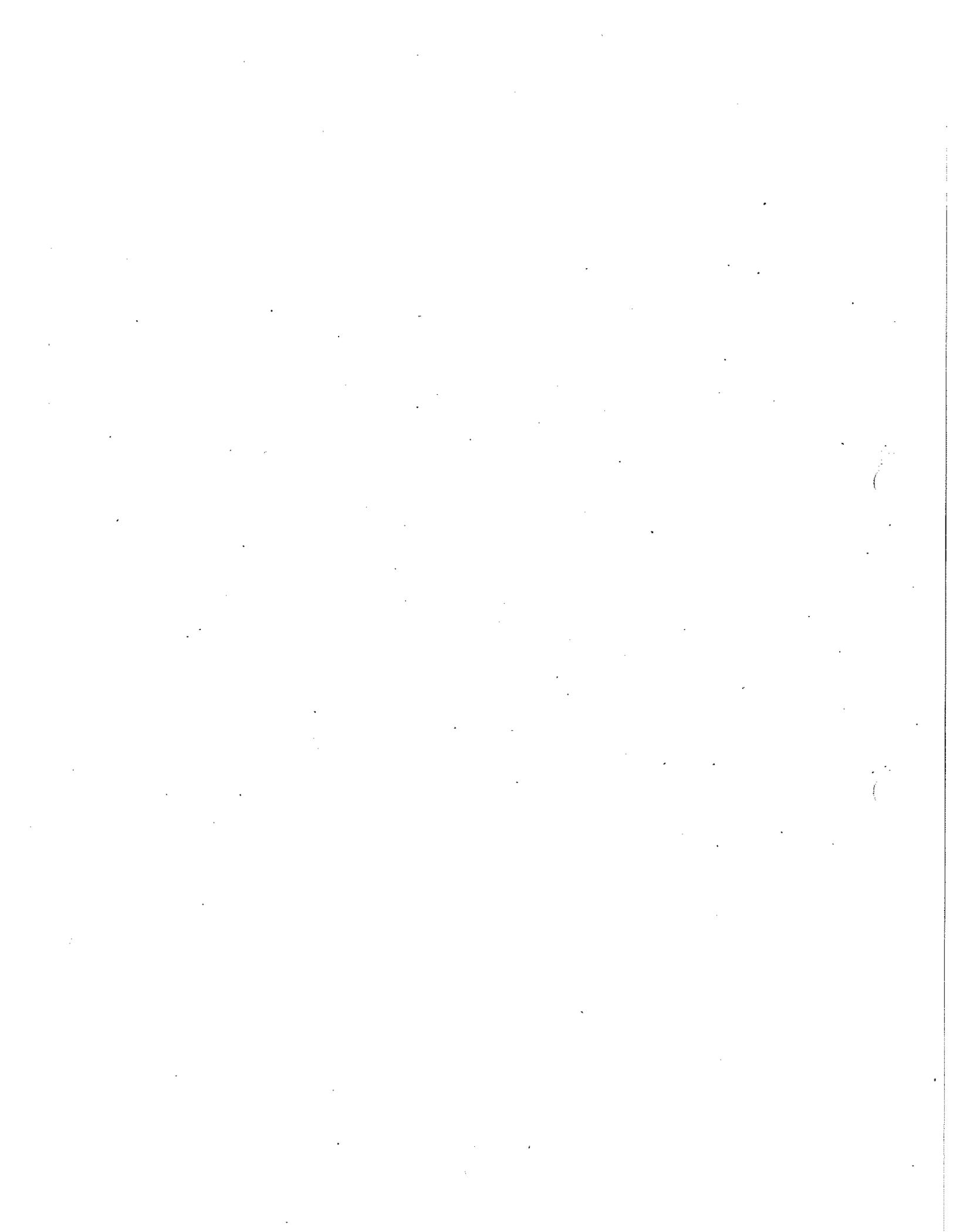
3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notifications shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any)



**VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR WORKFORCE REPORTING REQUIREMENTS**

The Contractor/Subcontractor shall submit to the State Resident Engineer assigned to this project, monthly and cumulative workforce information, on reporting forms provided herein. The monthly and cumulative workforce information shall be listed by construction trade category with the percentage of minority and female project hours in each category indicated. Failure to provide this information to the Resident Engineer on a monthly basis will result in suspension of bi-weekly progress payments, or part thereof due under the contract, until such time as the Contractor or Subcontractor demonstrates compliance with these contract terms.

Note: In lieu of using the reporting forms provided herein, the Contractor may use U.S. Department of Labor form CC-257, "Monthly Employment Utilization Report".



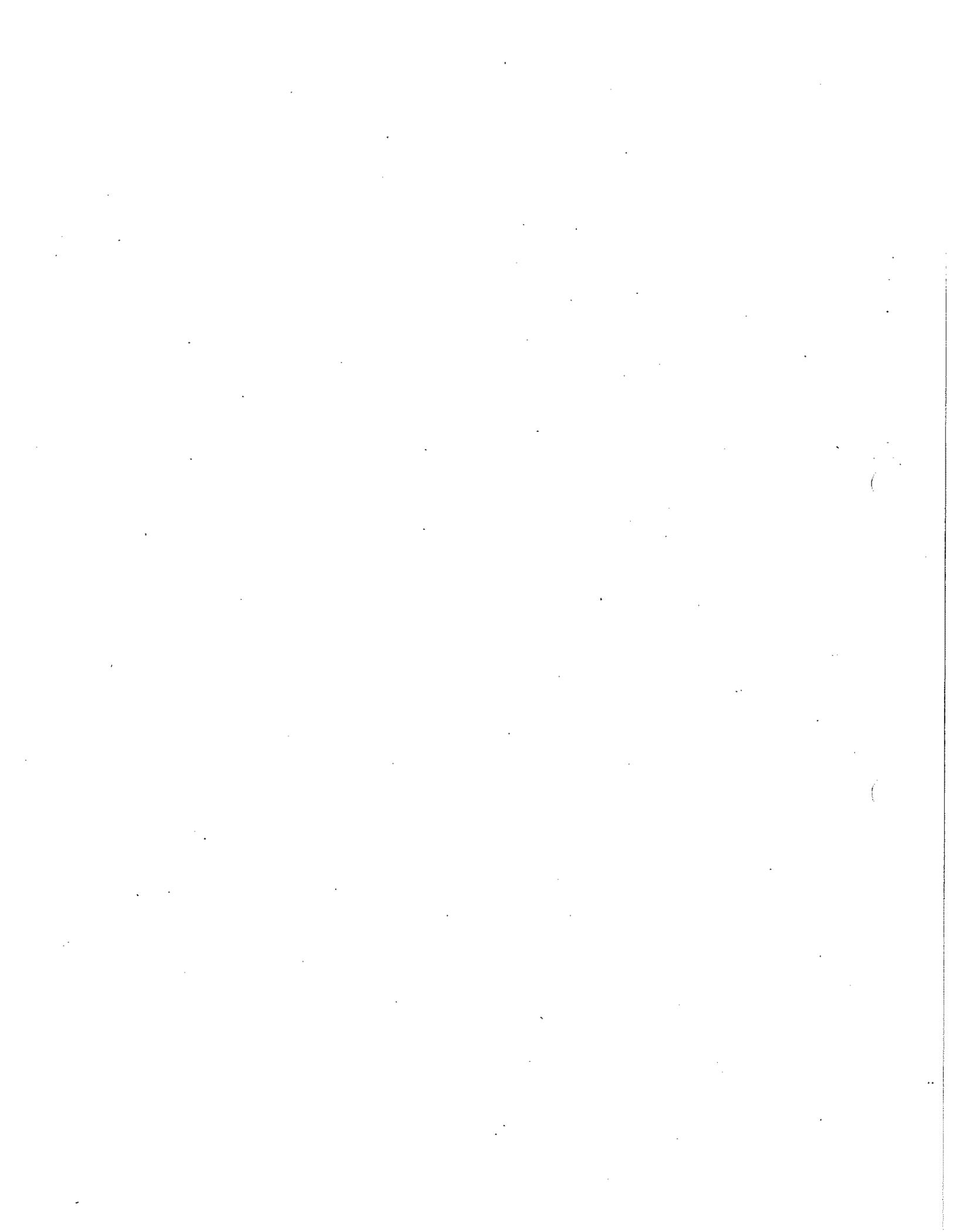
INSTRUCTIONS FOR FILING
MONTHLY EMPLOYMENT UTILIZATION REPORT

1. **PROJECT NAME AND NUMBER**
Complete project name and number as assigned by the Vermont Agency of Transportation.
2. **CONTRACTOR'S NAME AND ADDRESS**
Indicate the name and address of the *PRIME CONTRACTOR* with a construction contract funded in whole or in part with Federal funds.
3. **CURRENT GOALS**
See section of contract regarding requirement for Affirmative Action (Executive Order 11246).
4. **REPORTING PERIOD**
Monthly, beginning with the effective date of the contract.
5. **CONSTRUCTION TRADE CLASSIFICATION**
Indicate only those classifications used on this contract.
6. **TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE**
Indicate the total number of hours (male and female *combined*) worked by employees in each trade classification.
7. **BLACK,/HISPANIC/ASIAN/AMERICAN INDIAN/WHITE CATEGORIES**
Indicate the total number of hours (male and female *separated*) worked by each specified ethnic group of employees in each classification.
8. **PERCENTAGE OF TOTAL WORK HOURS - MINORITY**
Indicate the PERCENTAGE of total minority work hours (male and female *MINORITIES combined*) of all work hours (the sum of the BLACK, HISPANIC, ASIAN, and AMERICAN INDIAN columns divided by the sum of TOTAL NUMBER OF ALL WORK HOURS - just one figure for each construction trade.)
9. **PERCENTAGE OF TOTAL WORK HOURS - FEMALE**
Divide the TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE for each classification by the total number of females reported in BLACK, HISPANIC, ASIAN, AMERICAN INDIAN and **WHITE** for each classification.
10. **TOTAL NUMBER OF EMPLOYEES**
Indicate the total number of male employees and the total number of female employees working in each classification in the contractor's work force during the reporting period.
11. **TOTAL NUMBER OF MINORITY EMPLOYEES**
Indicate the total number of male *MINORITY* employees and the total number of female *MINORITY (non-white)* employees working in each classification in the contractor's work force during the reporting period.
12. **COMPLETE THE FORM: SIGNATURE, TITLE, PHONE NUMBER, DATE, PAGE ____ OF ____.**
13. **AT THE END OF EACH MONTH, SUBMIT** the completed Monthly Employment Utilization Report Form to the State Resident Engineer on the project site. One of these forms should be completed for each month of the contract.

**INSTRUCTIONS FOR FILING
CUMULATIVE MONTHLY EMPLOYMENT UTILIZATION REPORT**

[Using the Monthly Employment Utilization Reports collected from the subcontractors on the job, COMBINE all the information to complete the CUMULATIVE Monthly Employment Utilization Report Form and submit to the State Resident Engineer on the project each month.]

1. **PROJECT NAME AND NUMBER**
Complete project name and number as assigned by the Vermont Agency of Transportation.
2. **CONTRACTOR'S NAME AND ADDRESS**
Indicate the name and address of the *PRIME CONTRACTOR* with a construction contract funded in whole or in part with Federal funds.
3. **CURRENT GOALS**
See section of contract regarding requirement for Affirmative Action (Executive Order 11246).
4. **REPORTING PERIOD**
Monthly, beginning with the effective date of the contract.
5. **CONSTRUCTION TRADE CLASSIFICATION**
Indicate only those classifications used on this contract.
6. **TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE**
Indicate the total number of hours (male and female *combined*) worked by employees in each trade classification.
7. **BLACK/HISPANIC/ASIAN/AMERICAN INDIAN/WHITE CATEGORIES**
Indicate the total number of hours (male and female *separated*) worked by each specified ethnic group of employees in each classification.
8. **PERCENTAGE OF TOTAL WORK HOURS - MINORITY**
Indicate the PERCENTAGE of total minority work hours (male and female *MINORITIES combined*) of all work hours (the sum of the BLACK, HISPANIC, ASIAN, and AMERICAN INDIAN columns divided by the sum of TOTAL NUMBER OF ALL WORK HOURS - just one figure for each construction trade.)
9. **PERCENTAGE OF TOTAL WORK HOURS - FEMALE**
Divide the TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE for each classification by the total number of females reported in BLACK, HISPANIC, ASIAN, AMERICAN INDIAN and **WHITE** for each classification.
10. **TOTAL NUMBER OF EMPLOYEES**
Indicate the total number of male employees and the total number of female employees working in each classification in the contractor's work force during the reporting period.
11. **TOTAL NUMBER OF MINORITY EMPLOYEES**
Indicate the total number of male *MINORITY* employees and the total number of female *MINORITY (non-white)* employees working in each classification in the contractor's work force during the reporting period.
12. **COMPLETE THE FORM: SIGNATURE, TITLE, PHONE NUMBER, DATE, PAGE ____ OF ____.**
13. **AT THE END OF EACH MONTH, SUBMIT** the completed **CUMULATIVE** Monthly Employment Utilization Report Form to the State Resident Engineer on the project site. One of these forms should be completed for each month of the contract.



- (3) Hauling or operation of said vehicles or equipment over any permanent course of any bituminous pavement or any structure during active construction will not be permitted.
 - (4) No loads of any category will be permitted on a concrete pavement or concrete structure prior to expiration of the curing period and until the concrete reaches its specified 28-day compressive strength.
 - (5) Notwithstanding those restrictions above, the Contractor shall be responsible for any and all damages incurred to any public roadway as defined in Title 23 due to the use of any equipment or vehicles related to project activities.
8. 105.26 OPENING WASTE, BORROW, AND STAGING AREAS, part (f), is hereby corrected by deleting punctuation "." at the end of the paragraph.

SECTION 108 - PROSECUTION AND PROGRESS

9. 108.09 TEMPORARY SUSPENSION OF THE WORK, part (d) Seasonal Closure, is hereby modified by deleting the phrase "of the Engineer, and only under such conditions as specified therein" and replacing it with the phrase "from the Regional Construction Engineer" in the first sentence.
10. 108.09 TEMPORARY SUSPENSION OF THE WORK, part (d) Seasonal Closure, is hereby further modified by adding the following:
- Permission will only be granted for work which will result in a direct benefit to the State or the traveling public. Items which may be considered as a benefit include but are not limited to shorter Contract duration, a cost savings, increased safety for the traveling public, and an ability to ensure the quality of work. The Contractor shall request permission in writing, detailing what Contract items may be affected, a schedule of work, and the benefits to the State or traveling public.
11. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (8), is hereby modified by deleting the phrase ", delays in submittals, errors in submittals, and the Contractor's means and methods of construction".
12. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (9), is hereby modified by deleting the phrase ", including but not limited to the Contractor's means and methods of construction".
13. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (11), is hereby modified by being deleted in its entirety.
14. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (13), is hereby modified by adding the following as the first sentence:

Industry-wide material or supply shortages not reasonably anticipated by the Contractor at the time the Contract was entered.

15. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (13), is hereby further modified by changing the word "Delay" to the word "Delays" at the beginning of the second sentence.

SECTION 109 - MEASUREMENT AND PAYMENT

16. SECTION 109 - MEASUREMENT AND PAYMENT, is hereby corrected by deleting pages 1-141 and 1-142 in their entirety.

SECTION 203 - EXCAVATION AND EMBANKMENTS

17. 203.01 DESCRIPTION, is hereby modified by adding the phrase "performing test borings for the purpose of determining areas of roadway and embankment subsurface voids;" after the phrase "trimming and shaping of slopes;" in the first sentence of the first paragraph.
18. 203.01 DESCRIPTION, is hereby further modified by adding the following new part (1):
- (1) Test Borings. Test Borings shall consist of an investigative and planned approach to determining areas of roadway and embankment subsurface voids and repairing bored areas.
19. 203.02 MATERIALS, is hereby modified by adding the following to the Subsection listing:

PVC Plastic Pipe.....710.06

20. 203.02 MATERIALS, is hereby further modified by adding the following paragraphs:

Concrete for backfilling subsurface voids shall meet the requirements of Controlled Density (Flowable) Fill of Section 541.

Bituminous concrete pavement shall conform to the requirements of Section 406 or 490, as applicable for the Contract, with the exception that the mix design submittal and plant inspection requirements set forth in Section 406 or 490 will not apply.

21. 203.03 GENERAL CONSTRUCTION REQUIREMENTS, is hereby modified by adding the following as the eighth paragraph:

Prior to the construction of Test Borings and the placement of Controlled Density (Flowable) Fill, the Contractor shall submit to the Engineer site-specific plans, detailing the schedule of work (for these two items), type and location of drilling, sleeve installation, pumping system, confirmatory boring operation, method of filling bore hole (with or without voids being encountered), and repair of the roadway section (sand, gravel, and pavement).

22. 203.11 EMBANKMENTS, is hereby modified by adding the following new part (e):

(e) Test Borings. Test borings shall be performed at the approximate locations indicated in the Plans and/or as directed by the Engineer.

When used adjacent to culverts, test borings shall extend to a depth equal to the bottom of the culvert using casing advanced drilling methods. Alternate drilling equipment that provides a suitably clean, open hole may be submitted to the Engineer for approval.

If void(s) are encountered, Controlled Density (Flowable) Fill shall be placed to completely fill the void(s). Confirmatory borings shall be performed in these locations as directed by the Engineer.

The roadway surface at boring hole locations shall be backfilled and then patched using Bituminous Concrete Pavement.

23. 203.13 METHOD OF MEASUREMENT, is hereby modified by adding the following new part (e):

(e) Test Borings. The quantity of Test Borings to be measured for payment will be the number of meters (linear feet) of test boring performed in the complete and accepted work.

24. 203.14 BASIS OF PAYMENT, is hereby modified by adding the phrase "and Test Borings" after the phrase "Shoulder Berm Removal" in the first sentence of the first paragraph.

25. 203.14 BASIS OF PAYMENT, is hereby further modified by adding the phrase "submitting site-specific plans as required, performing test borings, installing sleeves, backfilling, patching with bituminous concrete pavement," after the phrase "work specified," in the second sentence of the first paragraph.

26. 203.14 BASIS OF PAYMENT, is hereby corrected by adding a period at the end of the sixth paragraph.

27. 203.14 BASIS OF PAYMENT, is hereby still further modified by adding the following paragraph and pay item:

Filling of subsurface voids encountered in performing Test Borings will be paid for under Contract item 541.45.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
203.45 Test Borings	Meter (Linear Foot)

SECTION 406 - MARSHALL BITUMINOUS CONCRETE PAVEMENT

28. 406.03 COMPOSITION OF MIXTURE, part (f) Boxed Samples, is hereby corrected by adding the word "Engineer" to the end of the second (last) sentence.
29. 406.16 SURFACE TOLERANCE, is hereby modified by adding the phrase ", with the exception of all limited access highway on and off ramps," after the phrase "miscellaneous mix" in the second (last) sentence of the sixth (last) paragraph.

SECTION 490 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

30. 490.14 COMPACTION, part (c) Coring Protocol, is hereby corrected by deleting text "0" and replacing it with text ")" in the first sentence of the seventh paragraph.
31. 490.16 SURFACE TOLERANCE, is hereby modified by adding the phrase ", with the exception of all limited access highway on and off ramps," after the phrase "miscellaneous mix" in the second (last) sentence of the sixth (last) paragraph.

SECTION 501 - HPC STRUCTURAL CONCRETE

32. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (Metric), is hereby modified by deleting the fourth column (with header "Max. Slump (mm)") in its entirety and replacing it with the following:

Max. ⁷ Slump (mm)

N/A.

33. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (Metric), is hereby further modified by adding the following footnote:

⁷ The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 200 mm, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

34. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (English), is hereby modified by deleting the fourth column (with header "Max. Slump (in)") in its entirety and replacing it with the following:

Max. ⁷ Slump (mm)

N/A

35. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (English), is hereby corrected by deleting text "700 mm" and replacing it with text "28 inches" in footnote 4.
36. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (English), is hereby further modified by adding the following footnote:

⁷ The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 8 inches, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

37. 501.03 CLASSIFICATION AND PROPORTIONING, is hereby corrected by deleting the phrase "1716 Barre-Montpelier Rd., Berlin, Vermont 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the second sentence of the ninth paragraph (beginning "A minimum of thirty (30)...").
38. 501.11 DEPOSITING CONCRETE UNDERWATER, part (a) General, subpart (1), is hereby corrected by deleting the phrase "1716 Barre-Montpelier Rd., Berlin, Vermont 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the second sentence of the second paragraph.

SECTION 505 - PILING

39. 505.09 BASIS OF PAYMENT, is hereby modified by adding the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
505.12 Steel Piling, HP 250 x 85 (HP 10 x 57)	Meter (Linear Foot)

49. 507.02 MATERIALS, is hereby modified by deleting the sixth (final) entry in the Subsection listing.
50. 507.03 FABRICATION AND SHIPMENT, part (a) General, is hereby modified by adding the phrase "deformed bar" after the phrase "shall be" in the first paragraph.
51. 507.03 FABRICATION AND SHIPMENT, part (a) General, is hereby corrected by deleting punctuation ".." and replacing it with punctuation "." at the end of the first paragraph.
52. 507.04 PROTECTION OF MATERIAL, is hereby modified by adding the following as the second sentence in the first paragraph:
- When multiple levels of reinforcing steel are used on a project, they shall be stored separately, including during transport in order that there is no direct contact between the bars.
53. 507.04 PROTECTION OF MATERIAL, is hereby further modified by deleting the phrase "The epoxy coating" and replacing it with the word "Coatings" in the third sentence of the third paragraph.
54. 507.04 PROTECTION OF MATERIAL, is hereby still further modified by deleting the phrase "as required for damaged areas" and replacing it with the phrase "per the coating manufacturer's recommendations and to the satisfaction of the Engineer" in the third sentence of the fifth (last) paragraph.
55. 507.04 PROTECTION OF MATERIAL, is hereby still further modified by adding the following paragraph:
- All ends of Level II reinforcement where the mild steel core is exposed shall be capped in accordance with one of the following:
- (a) Heat-shrink cap applied in accordance with the cap manufacturer's instructions.
 - (b) Neoprene cap adhered with silicone or epoxy sealant.
 - (c) Stainless steel cap epoxied in place.
 - (d) Stainless steel seal weld.
56. 507.05 PLACING AND FASTENING REINFORCING STEEL, is hereby modified by deleting the sixth paragraph in its entirety and replacing it with the following:
- Tie wires and supports used for installation of reinforcement shall be composed of the same material as any steel being contacted or shall be plastic. When forms are to be removed in their entirety, uncoated steel chairs equipped with snug-fitting, high-density, polyethylene tips which provide 3 mm (1/4 inch) clearance between the metal and any exposed surface may be used.
57. 507.10 METHOD OF MEASUREMENT, is hereby modified by deleting the phrase ", Epoxy Coated Reinforcing Steel, and Galvanized Reinforcing Steel" and replacing it with the phrase "of the type and size specified" in the first paragraph.

SECTION 506 - STRUCTURAL STEEL

40. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, is hereby modified by deleting the tenth paragraph (Beginning "Bolts shall be tightened...") in its entirety and replacing it with the following:
- Bolts shall be tightened to develop a tension not less than 5 percent in excess of the minimum bolt tension specified in Table 506.19A. Bolts shall not be tightened to more than the maximum tension specified in Table 506.19A.
41. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, is hereby further modified by deleting subparts (1) Calibrated Wrench Method, (2) Turn of the Nut Method, and (3) Torque Method in their entirety.
42. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, subpart (4) Tension Control Assembly Method, is hereby modified by being re-designated as part (1).
43. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, subpart (5) Direct Tension Indicator Method, is hereby modified by being re-designated as part (2).
44. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, is hereby still further modified by deleting TABLE 506.19B (including associated paragraphs) in its entirety.
45. 506.19 BOLTING AND CONNECTIONS, part (d) Acceptance of Bolt Tensioning, is hereby modified by deleting the second and third sentences of the first paragraph.
46. 506.19 BOLTING AND CONNECTIONS, part (d) Acceptance of Bolt Tensioning, is hereby further modified by deleting the fourth, fifth, ninth, eleventh, and twelfth paragraphs in their entirety.

SECTION 507 - REINFORCING STEEL

47. 507.01 DESCRIPTION, is hereby modified by adding the phrase "of the level specified" after the phrase "bar reinforcement".
48. 507.01 DESCRIPTION, is hereby further modified by adding the following paragraphs:

Levels and associated types of reinforcing steel are specified as follows:

- (a) Level I (Limited Corrosion Resistance). Level I reinforcing includes plain, low alloy, and epoxy coated reinforcing steel.
- (b) Level II (Improved Corrosion Resistance). Level II reinforcing includes stainless clad and dual-coated reinforcing steel.
- (c) Level III (Exceptional Corrosion Resistance). Level III reinforcing includes solid stainless reinforcing steel.

The location, level, and when specified, type of reinforcing shall be as indicated in the Plans. Reinforcing supplied shall meet the requirements of the level specified or any higher level. Only one type of reinforcing steel shall be used for each level for the Contract work, unless permitted in writing by the Engineer.

58. 507.10 METHOD OF MEASUREMENT, is hereby further modified by adding the phrase "of the type specified" at the end of the second paragraph (beginning "The quantity of Drilling and Grouting Dowels...").
59. 507.11 BASIS OF PAYMENT, is hereby modified by deleting the following pay items:

<u>Pay Item</u>	<u>Pay Unit</u>
507.15 Reinforcing Steel	Kilogram (Pound)
507.17 Epoxy Coated Reinforcing Steel	Kilogram (Pound)
507.18 Galvanized Reinforcing Steel	Kilogram (Pound)

60. 507.11 BASIS OF PAYMENT, is hereby further modified by adding the following pay items:

<u>Pay Item</u>	<u>Pay Unit</u>
507.11 Reinforcing Steel, Level I	Kilogram (Pound)
507.12 Reinforcing Steel, Level II	Kilogram (Pound)
507.13 Reinforcing Steel, Level III	Kilogram (Pound)

SECTION 516 - EXPANSION DEVICES

61. 516.01 DESCRIPTION, is hereby modified by adding the phrase ", or partially removing and modifying," after the word "installing".
62. 516.05A PARTIAL REMOVAL AND MODIFICATION, is hereby made a new Subsection of the Standard Specifications as follows:

516.05A PARTIAL REMOVAL AND MODIFICATION. The Contractor shall partially remove and modify the existing bridge joint at the locations indicated in the Plans and as directed by the Engineer.

Steel for new joint plates shall meet the requirements of Subsection 714.02.

The Contractor shall remove and dispose of existing joint plates, drain troughs, and associated hardware.

The Contractor shall grind existing steel plates and/or shoulder concrete to the configuration shown on the Plans. The final surface shall be to the satisfaction of the Engineer.

63. 516.06 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Partial Removal and Modification of Bridge Joint to be measured for payment will be the number of meters (linear feet) of bridge joint removed and modified in the complete and accepted work, measured along its centerline.

64. 516.07 BASIS OF PAYMENT, is hereby modified by adding the following paragraph and pay item:

The accepted quantity of Partial Removal and Modification of Bridge Joint will be paid for at the Contract unit price per meter (linear foot). Payment will be full compensation for partially removing and modifying the existing joint as specified and as detailed in the Plans, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
516.20 Partial Removal and Modification of Bridge Joint	Meter (Linear Foot)

SECTION 525 - BRIDGE RAILINGS

65. 525.02 MATERIALS, is hereby modified by adding the following as the third entry in the Subsection listing:

Structural Steel.....714.02

66. 525.06 INSTALLATION, part (a) General, is hereby modified by adding the following as the sixth (last) paragraph:

Concrete railing shall receive an aesthetic finish in accordance with Subsection 501.16. Cracks in concrete railing shall be repaired by a method approved by the Engineer. Cracks in concrete greater than 0.25 mm (0.01 inch) may be cause for rejection.

67. 525.08 BASIS OF PAYMENT, is hereby modified by adding the phrase "for furnishing all forms, joint filler, admixtures, trial batches, and connection plates for approach railing terminal connectors; for satisfactory completion of any necessary repairs, surface finishing, and curing;" after the phrase "for all work necessary for verifying and adjusting post height and/or bolt spacing of existing posts;" in the second (last) sentence of the third paragraph.

68. 525.08 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
525.45 Bridge Railing, Galvanized Steel Tubing/ Concrete Combination	Meter (Linear Foot)

SECTION 531 - BRIDGE BEARING DEVICES

69. 531.04 FABRICATION, part (b) Surface Protection, is hereby corrected by deleting punctuation ",." at the end of the paragraph and replacing it with punctuation ".".

SECTION 540 - PRECAST CONCRETE

70. 540.02 MATERIALS, is hereby modified by deleting the fourteenth entry (beginning "Coated Bar Reinforcement...") in the Subsection listing.

71. 540.02 MATERIALS, is hereby further modified by adding the following as the twenty-eighth entry in the Subsection listing:

Sheet Membrane Waterproofing, Preformed Sheet.....726.11

72. 540.07 FABRICATION, part (e) Placing Concrete, is hereby modified by deleting the phrase "done with care" and replacing it with the phrase "performed in accordance with Subsection 501.10(f)" in the third (last) sentence.

73. 540.10 INSTALLATION, is hereby modified by adding the following new part (c):

- (c) Sheet Membrane Waterproofing. A reinforced asphalt, synthetic resin, or coal-tar based preformed sheet membrane shall be placed over the joints of precast concrete units in accordance with the Contract Documents. All work performed shall be in accordance with the manufacturer's recommendations.

Material for membrane shall meet the requirements of Subsection 726.11.

Waterproofing shall not be performed in wet weather or when the temperature is below 5°C (40°F), without the authorization of the Engineer.

The concrete surfaces that are to be waterproofed shall be reasonably smooth and free from projections or holes and shall be cleaned of dust and loose material. The surfaces shall be visibly dry prior to and during application of the membrane system.

74. 540.14 BASIS OF PAYMENT, is hereby modified by adding the following paragraph:

Furnishing and placing preformed sheet membrane waterproofing, including primer, mastic, polyurethane membrane sealant, and surface preparation, is considered incidental to the work for Precast Concrete Structure.

SECTION 541 - STRUCTURAL CONCRETE

75. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby modified by deleting footnote designation "*" in the first and fourth entries of the third row (for "Class A" concrete).
76. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby further modified by deleting footnote "*" and associated text (beginning "* When this class of concrete...").

77. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby still further modified by deleting the fourth (with header "Range in Slump (mm)") and fifth (with header "Air Cont. (%)") columns in their entirety and replacing them with the following:

Range* in Slump (mm)	Air Content (%)
---	7.0 ± 1.5
---	7.0 ± 1.5
---	7.0 ± 1.5
---	5.5 ± 1.5
---	5.5 ± 1.5
---	7.0 ± 1.5

78. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby still further modified by adding the following footnote:

* The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 200 mm, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

79. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby modified by deleting footnote designation "*" in the first and fourth entries of the third row (for "Class A" concrete).
80. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby further modified by deleting footnote "*" and associated text (beginning "* When this class of concrete...").

81. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby still further modified by deleting the fourth (with header "Range in Slump (in.)") and fifth (with header "Air Cont. (%)") columns in their entirety and replacing them with the following:

Range* in Slump (mm)	Air Content (%)
---	7.0 ± 1.5
---	7.0 ± 1.5
---	7.0 ± 1.5
---	5.5 ± 1.5
---	5.5 ± 1.5
---	7.0 ± 1.5

82. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby still further modified by adding the following footnote:

* The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 8 inches, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

83. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric) is hereby modified by adding the following as the eighth (bottom) row with the included footnotes:

Controlled Density (Flowable) Fill	To be designed ***	To be designed :****	To be designed *****	10 min.	704.01 (Fine Aggregate)	0.85 max. *****	---
---	--------------------------	----------------------------	----------------------------	------------	-------------------------------	-----------------------	-----

*** A mineral admixture may be used to replace a portion of the cement.

**** The minimum amount of water shall be used to produce the desirable flow for the intended use without showing segregation.

***** The slump (flowability) shall be such that material is able to completely fill the voids or area as needed without segregation.

*****A minimum of 3 cylinders per test age required to constitute a test. If average strength at 28 days exceeds 115% of max. strength, then payment for Contract item 541.45 will be 85% of the Contract bid price.

84. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English) is hereby modified by adding the following as the eighth (bottom) row with the included footnotes:

Controlled Density (Flowable) Fill	To be designed ***	To be designed ****	To be designed *****	10 min.	704.01 (Fine Aggregate)	125 max. *****	---
---	--------------------------	---------------------------	----------------------------	------------	-------------------------------	----------------------	-----

- *** A mineral admixture may be used to replace a portion of the cement.
- **** The minimum amount of water shall be used to produce the desirable flow for the intended use without showing segregation.
- ***** The slump (flowability) shall be such that material is able to completely fill the voids or area as needed without segregation.
- *****A minimum of 3 cylinders per test age required to constitute a test. If average strength at 28 days exceeds 115% of max. strength, then payment for Contract item 541.45 will be 85% of the Contract bid price.

85. 541.10 PLACING CONCRETE, part (c) Placement Limitations, is hereby modified by adding the following paragraphs:

Flowable fill shall be applied to voids and other locations as specified in the Contract Documents and as directed by the Engineer. Flowable fill shall be able to completely fill the existing voids.

If voids are discovered, the Engineer may direct the Contractor to submit a plan for filling the remaining voids. This work, including preparing and submitting the plan and filling any remaining voids, will be at the Contractor's expense.

86. 541.11 DEPOSITING CONCRETE UNDERWATER, part (a) General, subpart (1), is hereby corrected by deleting the phrase "1716 Barre-Montpelier Rd., Berlin, Vermont 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the second sentence of the second paragraph.

87. 541.19 METHOD OF MEASUREMENT, is hereby modified by deleting the phrase "or LW" and replacing it with the phrase "LW, or Flowable Fill" in the first sentence of the first paragraph.

88. 541.20 BASIS OF PAYMENT, is hereby modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
541.45 Controlled Density (Flowable) Fill	Cubic Meter (Cubic Yard)

SECTION 580 - STRUCTURAL CONCRETE REPAIR

89. 580.02 MATERIALS, is hereby modified by adding the following to the Subsection listing:

Polymer Concrete Repair Material.....780.05

90. 580.03 PROPORTIONING AND MIXING, is hereby modified by deleting the last sentence of the first paragraph in its entirety and replacing it with the following:

The product shall not be extended with sand or gravel, except for Rapid Setting Concrete Repair Material with Coarse Aggregate and Polymer Concrete Repair Material when mixed with approved aggregates in conformance with the manufacturer's recommendations.

91. 580.04 SURFACE PREPARATION FOR REPAIRS, OVERLAYS AND MEMBRANES, is hereby modified by adding the word "abrasive" after the phrase "shall be" and before the phrase "blast cleaned" in the first sentence of the third paragraph.

92. 580.04 SURFACE PREPARATION FOR REPAIRS, OVERLAYS AND MEMBRANES, is hereby further modified by adding the phrase ", or Polymer Concrete Repair Material," after the word "Aggregate" in the sixth paragraph.

93. 580.08 METHOD OF MEASUREMENT, is hereby modified by deleting the phrase "and not for new patches, which will be the responsibility of the Contractor" and replacing it with the phrase ", with no deductions made for areas of new patches" in the second sentence of the ninth paragraph.

94. 580.08 METHOD OF MEASUREMENT, is hereby further modified by adding the phrase ", and Polymer Concrete Repair Material" after the word "Aggregate" in the first sentence of the tenth paragraph.

95. 580.09 BASIS OF PAYMENT, is hereby modified by adding the phrase ", and Polymer Concrete Repair Material" after the word "Aggregate" in the seventh paragraph.

96. 580.09 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
580.21 Polymer Concrete Repair Material	Cubic Meter (Cubic Yard)

SECTION 601 - CULVERTS AND STORM DRAINS

97. 601.02 MATERIALS, is hereby modified by adding the following as the sixth entry in the Subsection listing:

Corrugated Polypropylene Pipe.....710.07

98. 601.07 JOINING PIPE, is hereby modified by adding the following new part (d) as follows:

(d) Corrugated Polypropylene Pipe. Corrugated Polypropylene pipe shall be joined by a system designed and approved by the pipe manufacturer. Couplings and fittings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints.

99. 601.11 BASIS OF PAYMENT, is hereby modified by changing the end of the pay item number range for CPEP Elbow from 601.5999 to 601.5899.

100. 601.11 BASIS OF PAYMENT, is hereby further modified by adding the following pay items:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
601.2800 to 601.2999 CPPP (SL)	Meter (Linear Foot)
601.5900 to 601.5999 CPPP Elbow	Each
601.7100 to 601.7199 CPPPES	Each

SECTION 608 - EQUIPMENT RENTAL

101. 608.02 GENERAL REQUIREMENTS, is hereby modified by adding the following new part (i):

(i) Truck-Mounted Attenuator, Advanced Warning Vehicle/Protection Vehicle (AWV/PV). Truck-Mounted Attenuator, AWV/PV shall consist of a Truck-Mounted Attenuator meeting the requirements of Subsection 608.02(h) and be equipped with a Changeable Message Sign in accordance with the MUTCD. The Changeable Message Sign shall be mounted so as to be clearly visible to the traveling public and shall be capable of being controlled from inside the cab of the vehicle, with capable controls including but not limited to turning the sign on and off, changing between preset messages, and inserting new messages when approved by the Engineer. Phases of signing shall have the ability to change automatically when required.

102. 608.04 BASIS OF PAYMENT, is hereby modified by changing the word "item" to "items" and by adding the phrase "and Truck-Mounted Attenuator, AWV/PV" after the phrase "Truck-Mounted Attenuator" in the second (last) paragraph.

103. 608.04 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
608.50 Truck-Mounted Attenuator, AWV/PV	Hour

SECTION 613 - STONE FILL, RIPRAP, AND SLOPE PAVING

104. 613.02 MATERIALS, is hereby modified by adding the following to the Subsection listing:

Rock Fill for Gabions.....	706.06
Gabion Baskets.....	712.04

105. 613.04 PLACING, is hereby modified by adding the following new part (d):

- (d) Rock Fill for Gabions. The furnishing and installing of gabion baskets shall be performed in accordance with the manufacturer's recommendations.

The Contractor should expect to perform some manual stone placement to minimize voids and to create a neat, flat vertical surface of gabions.

106. 613.05 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Gabion Wall to be measured for payment will be the number of cubic meters (cubic yards) of Rock Fill for Gabions placed in the complete and accepted work.

107. 613.06 BASIS OF PAYMENT, is hereby modified by adding the phrase "and Gabion Wall" after the word "specified" in the first sentence of the first paragraph.

108. 613.06 BASIS OF PAYMENT, is hereby modified by adding the phrase ", including gabion baskets," after the word "material" in the third (last) sentence of the first paragraph.

109. 613.06 BASIS OF PAYMENT, is hereby still further modified by adding the phrase "or rock" after the word "stone" in the first sentence of the second paragraph.

110. 613.06 BASIS OF PAYMENT, is hereby still further modified by adding the following paragraph:

Geotextile fabric and bedding material for Gabion Wall will be paid for under the appropriate Contract items.

111. 613.06 BASIS OF PAYMENT, is hereby still further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
613.25 Gabion Wall	Cubic Meter (Cubic Yard)

SECTION 616 - CURBS AND GUTTERS

112. 616.05 REPOINTING GRANITE BRIDGE CURB, is hereby made a new Subsection of the Standard Specifications as follows:

616.05 REPOINTING GRANITE BRIDGE CURB. The existing mortar bed and vertical curb joints shall be repointed as shown on the Plans. Mortar shall meet the requirements of Subsection 707.01.

113. 616.14 METHOD OF MEASUREMENT, is hereby modified by adding the following as the second paragraph:

The quantity of Repointing Granite Bridge Curb to be measured for payment will be the number of liters (gallons) of mortar applied in the completed and accepted work, measured to the nearest liter (gallon).

114. 616.14 METHOD OF MEASUREMENT, is hereby corrected by changing the word "portland" to "Portland" in the fifth (last) paragraph.

115. 616.15 BASIS OF PAYMENT, is hereby modified by adding the following as the second paragraph:

The accepted quantity of Repointing Granite Bridge Curb will be paid for at the Contract unit price per liter (gallon). Payment will be full compensation for furnishing, transporting, handling, and placing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

116. 616.15 BASIS OF PAYMENT, is hereby corrected by changing the word "portland" to "Portland" in the fourth paragraph.

117. 616.15 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
616.225 Repointing Granite Bridge Curb	Liter (Gallon)

SECTION 621 - TRAFFIC BARRIERS

118. 621.01 DESCRIPTION, is hereby modified by adding the phrase "repairing," after the phrase "removing,".

119. 621.02 MATERIALS, is hereby modified by adding the following as the fifth entry in the Subsection listing:

Wire Rope or Cable.....713.03

120. 621.13 REPLACEMENT, ADJUSTMENT, REMOVAL, AND DISPOSAL OF GURADRAIL OR GUIDE POSTS, is hereby modified by deleting the phrase "post assemblies and panel units" and replacing it with the phrase "guardrail components" in the second sentence of the first paragraph.

121. 621.13 REPLACEMENT, ADJUSTMENT, REMOVAL, AND DISPOSAL OF GUARDRAIL OR GUIDE POSTS, is hereby further modified by deleting the phrase "post assembly replacement or guardrail beam replacement occur" and replacing it with the phrase "guardrail component replacement occurs" in the fourth paragraph.

122. 621.13 REPLACEMENT, ADJUSTMENT, REMOVAL, AND DISPOSAL OF GURADRAIL OR GUIDE POSTS, is hereby still further modified by adding the following as the sixth and seventh paragraphs:

Offset blocks designated for replacement shall be replaced in-kind. Materials shall be in conformance with the applicable requirements of Subsection 728.01 for either wood, steel, or alternative blockouts.

Cable guardrail repair shall be performed in accordance with VTrans Standard Drawing G-6 and as directed by the Engineer.

123. 621.14 METHOD OF MEASUREMENT, is hereby modified by adding the following as the fourth and fifth paragraphs of the Subsection text:

The quantities of Cable Guardrail J-Bolt, Galvanized and Cable Guardrail Splice Unit to be measured for payment will be the number of units installed in the complete and accepted work.

The quantity of Replacement of Guardrail Cable to be measured for payment will be the number of meters (linear feet) installed in the complete and accepted work.

124. 621.14 METHOD OF MEASUREMENT, is hereby further modified by adding the following as the eighth paragraph of the Subsection text:

The quantities of Steel Beam Guardrail Delineator and Steel Beam Guardrail Offset Block to be measured for payment will be the number of each component replaced in the complete and accepted work.

125. 621.15 BASIS OF PAYMENT, is hereby modified by adding the following as the second, third, and fourth paragraphs of the Subsection text:

The accepted quantities of Cable Guardrail J-Bolt, Galvanized and Cable Guardrail Splice Unit will be paid for at the Contract unit price for each.

The accepted quantity of Replacement of Cable Guardrail will be paid for at the Contract unit price per meter (linear foot).

The accepted quantities of Steel Beam Guardrail Delineator and Steel Beam Guardrail Offset Block will be paid for at the Contract unit price for each.

126. 621.15 BASIS OF PAYMENT, is hereby further modified by adding the phrase "removing and disposing of damaged guardrail component(s)," after the phrase "specified," in the first sentence of the tenth paragraph.

127. 621.15 BASIS OF PAYMENT, is hereby still further modified by adding the following pay items:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
621.173 Cable Guardrail J-Bolt, Galvanized	Each
621.174 Cable Guardrail Splice Unit	Each
621.175 Replacement of Guardrail Cable	Meter (Linear Foot)
621.218 Steel Beam Guardrail Delineator	Each
621.219 Steel Beam Guardrail Offset Block	Each
621.70 Guardrail Approach Section, Galvanized Type I	Each
621.71 Guardrail Approach Section, Galvanized Type II	Each
621.726 Guardrail Approach Section, Galvanized 3 Rail Box Beam w/Curb	Each
621.735 Guardrail Approach Section, Steel Beam	Each
621.736 Guardrail Approach Section, Steel Beam w/2.4 m (8 feet) Posts	Each
621.737 Guardrail Approach Section; Galvanized HD Steel Beam	Each
621.738 Guardrail Approach Section, Galvanized HD Steel Beam w/2.4 m (8 feet) Posts	Each
621.748 Guardrail Approach Section to Concrete Combination Bridge Railing, TL-3	Each

SECTION 641 - TRAFFIC CONTROL

128. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby modified by adding the phrase "implement that plan or" after the phrase "the Contractor may" in the first sentence of the fourth paragraph.

129. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby further modified by adding the following as the second sentence of the fourth paragraph:

When the Contractor will implement an Agency-designed traffic control plan, written certification shall be submitted to the Engineer indicating that traffic control will be performed in accordance with the Agency design.

130. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby still further modified by changing the word "This" to the word "An" in the third sentence of the fourth paragraph.
131. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby still further modified by adding the following paragraph:

When the Contract Documents specify that a site-specific traffic control plan be submitted by the Contractor, Construction Drawings shall be submitted in accordance with Section 105. The submitted site-specific plan shall include, for each phase of construction requiring a significant change in temporary traffic control, a narrative description of the proposed temporary traffic control for each phase (including pedestrian accommodations where appropriate) and the major work activities to be completed in each phase; and a layout for each phase of construction showing existing lane configurations, existing traffic control devices (signs, signals, and pavement markings), driveways, ramps, and highway intersections, and the location of all proposed temporary traffic control devices, flaggers, and UTO's. All pertinent dimensions, such as taper lengths, sign spacing, temporary lane widths, and distance(s) from existing traffic control devices shall be labeled.

SECTION 653 - EROSION PREVENTION AND SEDIMENT CONTROL MEASURES

132. 653.15 BIOTECHNICAL SLOPE PROTECTION, part (a) Erosion Logs, is hereby modified by being deleted in its entirety and replaced with the following:

- (a) Erosion Logs. Erosion logs shall be installed to intercept water flow and collect sediment and associated pollutants by settling and filtering. Erosion logs may be placed over bare or mulched soils or rolled erosion control products; around inlet and outlets; as check dams in unvegetated ditches, slope interrupters on steep slopes, and perimeter control; and along stream banks as a base for plantings. Some types of erosion logs (typically those with a heavier filtering medium such as compost) can be used in applications where underlying conditions are unsuitable (frozen ground, paved surfaces, sensitive plantings areas, etc.) for trenching.

Prior to placing erosion logs, the ground surface shall be properly graded and compacted and free of depressions or obstructions such as tree roots, protruding stones, or other foreign matter.

Erosion logs shall be installed in accordance with the manufacturer's installation guidelines, staking pattern guide, and details based upon the intended use on the construction site.

The Contractor shall remove accumulated sediment when it has reached 1/2 of the effective height of the log, or as directed by the Engineer. Alternatively, a new erosion log may be placed on top of and slightly behind the original one creating more sediment storage capacity. Erosion logs shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.

When used as a temporary erosion prevention and sediment control measure, erosion logs may be cut open and left in place, but only if the fill material and netting are 100% biodegradable and the material is spread or graded flat so as to not cause concentration of future surface runoff.

SECTION 677 - OVERHEAD TRAFFIC SIGN SUPPORTS

133. 677.01 DESCRIPTION, is hereby modified by adding the phrase "and removing and disposing of existing overhead traffic sign supports," after the phrase "supports,".

134. 677.03 GENERAL, is hereby modified by adding the following paragraph:

Where existing overhead traffic sign supports are to be removed, the Contractor shall remove and dispose of the entire sign assembly, including concrete footings, to a depth of 450 mm (18 inches) below existing grade. Areas of ground disturbance shall be restored to the satisfaction of the Engineer.

135. 677.05 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Remove Existing Overhead Sign Assembly of the type specified to be measured for payment will be the number of each assembly removed in the complete and accepted work.

136. 677.06 BASIS OF PAYMENT, is hereby modified by adding the following paragraphs and pay items:

The accepted quantity of Remove Existing Overhead Sign Assembly of the type specified will be paid for at the Contract unit price per each. Payment will be full compensation for removing and disposing of assembly components, including concrete footings; for performing any excavation necessary; for restoring areas of ground disturbance; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Costs associated with providing traffic control and/or flaggers for performing the work will be paid under the appropriate Contract item(s).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
677.30 Remove Existing Overhead Sign Assembly, Cantilever	Each
677.35 Remove Existing Overhead Sign Assembly, Multi-Support	Each

SECTION 678 - TRAFFIC CONTROL SIGNALS

137. 678.01 DESCRIPTION, is hereby modified by adding the phrase ", and removing existing traffic control systems" after the word "system" in the first paragraph.
138. 678.02 MATERIALS, is hereby corrected by deleting "converters" and replacing it with the word "covers" in the second sentence of the last paragraph of the Subsection text.
139. 678.11 INSTALLATION, sixteenth paragraph, part (a), is hereby modified by adding the following as the third sentence:

The Contractor shall remove any equipment to be salvaged or reused in such a manner that the equipment is not damaged.

140. 678.13 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Removal of Existing Traffic Control Signal System to be measured for payment will be for each traffic control signal system removed in the complete and accepted work.

141. 678.14 BASIS OF PAYMENT, is hereby modified by adding the phrase "all removal, disposal, and salvage and/or reuse of existing system equipment and components," after the phrase "Electrical Wiring," in the second sentence of the first paragraph.

142. 678.14 BASIS OF PAYMENT, is hereby further modified by adding the following paragraph and pay item:

The accepted quantity of Removal of Existing Traffic Control Signal System will be paid for at the Contract unit price per each. Payment will be full compensation for removing and handling the existing traffic control signal system components as specified in the Contract Documents and for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
678.45 Removal of Existing Traffic Control Signal System	Each

SECTION 700 GENERAL

143. 700.01 GENERAL STATEMENT, is hereby corrected by deleting punctuation "... " at the end of the first sentence of the fourth paragraph and replacing it with punctuation ".".

SECTION 708 - PAINTS, STAINS, AND TRAFFIC MARKING MATERIALS

144. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (4) Sampling and Testing, c. Sample Delivery, is hereby corrected by deleting the phrase "1716 Barre-Montpelier Road, Berlin, VT 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the first paragraph.
145. 708.08 PAINT FOR PAVEMENT MARKINGS, part (d) Waterborne Traffic Paint, subpart (4) Sampling and Testing, c. Sample Delivery, is hereby corrected by deleting the phrase "1716 Barre-Montpelier Road, Berlin, VT 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the first paragraph.

SECTION 710 - CULVERTS, STORM DRAINS, AND SEWER PIPES, NONMETAL

146. 710.03 CORRUGATED POLYETHYLENE PIPE, is hereby modified by adding the following as the last sentence:

In order to maintain approval status, polyethylene pipe manufacturers must participate in, and maintain compliance with, the AASHTO National Transportation Product Evaluation Program (NTPEP), which audits producers of the pipe.

147. 710.07 CORRUGATED POLYPROPYLENE PIPE, is hereby made a new Subsection of the Standard Specifications as follows :
148. 710.07 CORRUGATED POLYPROPYLENE PIPE. Corrugated polypropylene pipe and fittings shall conform to the latest revisions of AASHTO M 330, Type S. Acceptable corrugated polypropylene pipe shall be one of the corrugated polypropylene pipe products on the Approved Products List on file with the Agency's Materials and Research Section. In order to maintain approval status, polypropylene pipe manufacturers must participate in, and maintain compliance with, the AASHTO National Transportation Product Evaluation Program (NTPEP), which audits producers of the pipe.

SECTION 713 - REINFORCING STEEL, WELDED WIRE REINFORCEMENT, AND REINFORCING STRAND

149. 713.01 BAR REINFORCEMENT, is hereby modified by deleting the phrase "conforming to AASHTO M 31M/M 31, including supplementary requirements" and replacing it with the phrase ", unless otherwise specified in the Contract Documents" in the first paragraph.
150. 713.01 BAR REINFORCEMENT, is hereby further modified by adding the following new parts (a)-(f) and associated paragraphs:
- (a) Plain Reinforcing Steel. Plain reinforcing steel shall conform to AASHTO M 31M/M 31, including supplementary requirements.
- (b) Low Alloy Reinforcing Steel. Low alloy reinforcing steel shall conform to ASTM A 706/A 706M.

- (c) Epoxy Coated Reinforcing Steel. Epoxy coated reinforcing steel shall have an electrostatically applied organic epoxy protective coating, which has been prequalified, fabricated, tested, and installed in accordance with AASHTO M 284M/M 284.
- (d) Stainless Clad Reinforcing Steel. Stainless clad reinforcing steel shall meet the requirements of AASHTO M 329M/M 329.
- (e) Dual-Coated Reinforcing Steel. Dual-coated reinforcing steel shall meet the requirements of ASTM A 1055/A 1055M.
- (f) Solid Stainless Reinforcing Steel. Solid stainless reinforcing steel shall meet the requirements of ASTM A 955/A 955M with one of the following UNS designations: S24100, S30400, S31603, S31653, S32101, S32201, S32205, or S32304. Different designations shall not be mixed within the same project.

Where no core steel requirements are specified in the above specifications, the steel core of the bar reinforcement shall meet the requirements of plain reinforcing steel.

Certification. A Type D Certification shall be furnished in accordance with Subsection 700.02. Certification for Epoxy Coated Reinforcing Steel shall include the coating and coating process.

151. 713.07 COATED BAR REINFORCEMENT, is hereby modified by being deleted in its entirety.

SECTION 714 - STRUCTURAL STEEL

152. 714.08 ANCHOR BOLTS, BEARING DEVICES, is hereby corrected by deleting ".F" and replacing it with "F" in the first sentence of the first paragraph.
153. 714.08 ANCHOR BOLTS, BEARING DEVICES, is hereby further corrected by deleting punctuation ".," and replacing it with punctuation "." at the end of the second sentence of the first paragraph.

SECTION 726 - PROTECTIVE COATINGS AND WATERPROOFING MATERIALS

154. 726.10 CONCRETE STAINING AND SEALING SYSTEMS, is hereby made a new Subsection of the Standard Specifications as follows:

726.10 CONCRETE STAINING AND SEALING SYSTEMS. Approved Concrete Staining and Sealing Systems shall be one of the Concrete Staining and Sealing Systems on the Approved Products List on file with the Agency's Materials and Research Section.

155. 726.11 SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET, is hereby made a new Subsection of the Standard Specifications as follows:

726.11 SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET. Approved Preformed Sheet Membrane Waterproofing Systems shall be one of the Preformed Sheet Membrane Waterproofing Systems on the Approved Products List on file with the Agency's Materials and Research Section.

SECTION 731 - BEARING PADS FOR STRUCTURES

156. 731.03 ELASTOMERIC MATERIAL, is hereby modified by deleting the second and third paragraphs in their entirety and replacing them with the following:

Unless noted otherwise, elastomer shall have a design hardness of 50 points and a design shear modulus of 0.8 MPa (110 psi).

Testing of elastomeric material shall be waived for bearings that will be encased in concrete in the final work. All other bearings shall be tested in accordance with the following table:

TABLE 731.03A - REQUIRED TESTS

Material Property	Test Method	Required Result
Hardness	ASTM D 2240	design hardness +/- 5 points
	or	
Shear Modulus	ASTM D 412 with AASTHO M 251 Section 8.8.4	design shear modulus +/- 15%
Low Temperature Brittleness	ASTM D 746 Procedure B	Pass Grade 4 test
Shear Bond Strength	AASHTO M 251 Annex A2 or Appendix X2	Pass
Min Tensile Strength	ASTM D 412	15.6 MPa (2250 psi)
Min Ultimate Elongation	ASTM D 412	(650 - 5 X design hardness)%

SECTION 755 - LANDSCAPING MATERIALS

157. 755.17 EROSION LOGS, is hereby modified by being deleted in its entirety and replaced with the following:

Erosion logs are available in varying diameters. The Contractor shall follow the manufacturer's recommendations for the material type and size based on the intended use.

Erosion logs shall be composed of weed-seed-free coir, straw, excelsior, compost, or other biodegradable filtering medium encased in a photo-degradable and/or biodegradable netting or mesh.

Netting shall have openings of 13 to 25 mm (1/2 to 1 inch), with the exception of compost filled logs which should be 3 to 10 mm (1/8 to 3/8 inch) or as recommended by the manufacturer and accepted by the Engineer.

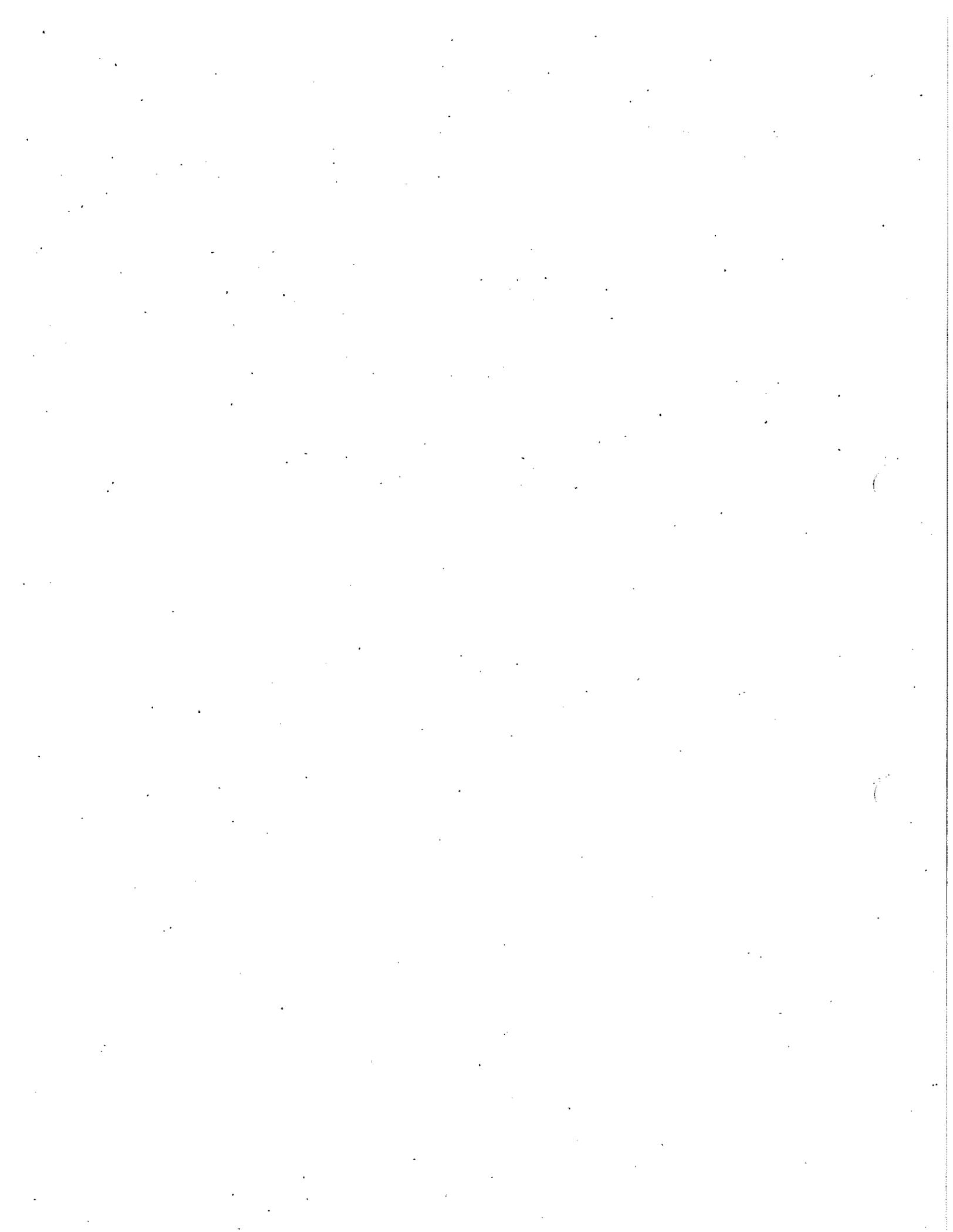
Anchors for erosion logs shall be wooden stakes, U-shaped wire or earth anchors, or rebar stakes; the size and length shall be as recommended by the manufacturer.

Compost shall meet the requirements of Table 755.05A, with the exception that particle size shall be 99% < 50 mm (2 inches) and maximum 30% < 10 mm (3/8 inch).

SECTION 780 - CONCRETE REPAIR MATERIALS

158. 780.05 POLYMER CONCRETE REPAIR MATERIAL, is hereby made a new Subsection of the Standard Specifications as follows:

780.05 POLYMER CONCRETE REPAIR MATERIAL. Approved Polymer Concrete Repair Materials shall be one of the Polymer Concrete Repair Materials on the Approved Products List on file with the Agency's Materials and Research Section.



ATTACHMENT C: STANDARD STATE PROVISIONS FOR CONTRACTS AND GRANTS

1. **Entire Agreement:** This Agreement, whether in the form of a Contract, State Funded Grant, or Federally Funded Grant, represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.
2. **Applicable Law:** This Agreement will be governed by the laws of the State of Vermont.
3. **Definitions:** For purposes of this Attachment, "Party" shall mean the Contractor, Grantee or Subrecipient, with whom the State of Vermont is executing this Agreement and consistent with the form of the Agreement.
4. **Appropriations:** If this Agreement extends into more than one fiscal year of the State (July 1 to June 30), and if appropriations are insufficient to support this Agreement, the State may cancel at the end of the fiscal year, or otherwise upon the expiration of existing appropriation authority. In the case that this Agreement is a Grant that is funded in whole or in part by federal funds, and in the event federal funds become unavailable or reduced, the State may suspend or cancel this Grant immediately, and the State shall have no obligation to pay Subrecipient from State revenues.
5. **No Employee Benefits For Party:** The Party understands that the State will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation or sick leave, workers compensation or other benefits or services available to State employees, nor will the state withhold any state or federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Agreement. The Party understands that all tax returns required by the Internal Revenue Code and the State of Vermont, including but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Party, and information as to Agreement income will be provided by the State of Vermont to the Internal Revenue Service and the Vermont Department of Taxes.
6. **Independence, Liability:** The Party will act in an independent capacity and not as officers or employees of the State.

The Party shall defend the State and its officers and employees against all claims or suits arising in whole or in part from any act or omission of the Party or of any agent of the Party. The State shall notify the Party in the event of any such claim or suit, and the Party shall immediately retain counsel and otherwise provide a complete defense against the entire claim or suit.

After a final judgment or settlement the Party may request recoupment of specific defense costs and may file suit in Washington Superior Court requesting recoupment. The Party shall be entitled to recoup costs only upon a showing that such costs were entirely unrelated to the defense of any claim arising from an act or omission of the Party.

The Party shall indemnify the State and its officers and employees in the event that the State, its officers or employees become legally obligated to pay any damages or losses arising from any act or omission of the Party.
7. **Insurance:** Before commencing work on this Agreement the Party must provide certificates of insurance to show that the following minimum coverages are in effect. It is the responsibility of the Party to maintain current certificates of insurance on file with the state through the term of the Agreement. No warranty is made that the coverages and limits listed

herein are adequate to cover and protect the interests of the Party for the Party's operations. These are solely minimums that have been established to protect the interests of the State.

Workers Compensation: With respect to all operations performed, the Party shall carry workers' compensation insurance in accordance with the laws of the State of Vermont.

General Liability and Property Damage: With respect to all operations performed under the contract, the Party shall carry general liability insurance having all major divisions of coverage including, but not limited to:

Premises - Operations
Products and Completed Operations
Personal Injury Liability
Contractual Liability

The policy shall be on an occurrence form and limits shall not be less than:

\$1,000,000 Per Occurrence
\$1,000,000 General Aggregate
\$1,000,000 Products/Completed Operations Aggregate
\$ 50,000 Fire/ Legal/Liability

Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.

Automotive Liability: The Party shall carry automotive liability insurance covering all motor vehicles, including hired and non-owned coverage, used in connection with the Agreement. Limits of coverage shall not be less than: \$1,000,000 combined single limit.

Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.

8. **Reliance by the State on Representations:** All payments by the State under this Agreement will be made in reliance upon the accuracy of all prior representations by the Party, including but not limited to bills, invoices, progress reports and other proofs of work.
9. **Requirement to Have a Single Audit:** In the case that this Agreement is a Grant that is funded in whole or in part by federal funds, the Subrecipient will complete the Subrecipient Annual Report annually within 45 days after its fiscal year end, informing the State of Vermont whether or not a single audit is required for the prior fiscal year. If a single audit is required, the Subrecipient will submit a copy of the audit report to the granting Party within 9 months. If a single audit is not required, only the Subrecipient Annual Report is required.

A single audit is required if the subrecipient expends \$500,000 or more in federal assistance during its fiscal year and must be conducted in accordance with OMB Circular A-133. The Subrecipient Annual Report is required to be submitted within 45 days, whether or not a single audit is required.

10. **Records Available for Audit:** The Party will maintain all books, documents, payroll papers, accounting records and other evidence pertaining to costs incurred under this agreement and make them available at reasonable times during the period of the Agreement and for three years thereafter for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three year period, the records shall be retained until all litigation, claims or audit findings

involving the records have been resolved. The State, by any authorized representative, shall have the right at all reasonable times to inspect or otherwise evaluate the work performed or being performed under this Agreement.

11. Fair Employment Practices and Americans with Disabilities Act: Party agrees to comply with the requirement of Title 21 V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Party shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990, as amended, that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Party under this Agreement. Party further agrees to include this provision in all subcontracts.

12. Set Off: The State may set off any sums which the Party owes the State against any sums due the Party under this Agreement; provided, however, that any set off of amounts due the State of Vermont as taxes shall be in accordance with the procedures more specifically provided hereinafter.

13. Taxes Due to the State:

- a. Party understands and acknowledges responsibility, if applicable, for compliance with State tax laws, including income tax withholding for employees performing services within the State, payment of use tax on property used within the State, corporate and/or personal income tax on income earned within the State.
- b. Party certifies under the pains and penalties of perjury that, as of the date the Agreement is signed, the Party is in good standing with respect to, or in full compliance with, a plan to pay any and all taxes due the State of Vermont.
- c. Party understands that final payment under this Agreement may be withheld if the Commissioner of Taxes determines that the Party is not in good standing with respect to or in full compliance with a plan to pay any and all taxes due to the State of Vermont.
- d. Party also understands the State may set off taxes (and related penalties, interest and fees) due to the State of Vermont, but only if the Party has failed to make an appeal within the time allowed by law, or an appeal has been taken and finally determined and the Party has no further legal recourse to contest the amounts due.

14. Child Support: (Applicable if the Party is a natural person, not a corporation or partnership.) Party states that, as of the date the Agreement is signed, he/she:

- a. is not under any obligation to pay child support; or
- b. is under such an obligation and is in good standing with respect to that obligation; or
- c. has agreed to a payment plan with the Vermont Office of Child Support Services and is in full compliance with that plan.

Party makes this statement with regard to support owed to any and all children residing in Vermont. In addition, if the Party is a resident of Vermont, Party makes this statement with regard to support owed to any and all children residing in any other state or territory of the United States.

15. Sub-Agreements: Party shall not assign, subcontract or subgrant the performance of his Agreement or any portion thereof to any other Party without the prior written approval of

the State. Party also agrees to include in all subcontract or subgrant agreements a tax certification in accordance with paragraph 13 above.

16. **No Gifts or Gratuities:** Party shall not give title or possession of any thing of substantial value (including property, currency, travel and/or education programs) to any officer or employee of the State during the term of this Agreement.
17. **Copies:** All written reports prepared under this Agreement will be printed using both sides of the paper.
18. **Certification Regarding Debarment:** Party certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, neither Party nor Party's principals (officers, directors, owners, or partners) are presently debarred, suspended, proposed for debarment, declared ineligible or excluded from participation in federal programs, or programs supported in whole or in part by federal funds.

Party further certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, Party is not presently debarred, suspended, nor named on the State's debarment list at: <http://bgs.vermont.gov/purchasing/debarment>

19. **Certification Regarding Use of State Funds:** In the case that Party is an employer and this Agreement is a State Funded Grant in excess of \$1,001, Party certifies that none of these State funds will be used to interfere with or restrain the exercise of Party's employee's rights with respect to unionization.

(End of Standard Provisions)

Special Provisions for: Brookfield BRF FLBR(2)

1. LABOR SUPPLY. Available workers for this Contract may be obtained from Manager, Employment & Training, Barre, VT. The latest edition of the DBE Registry can be obtained from the Office of Civil Rights and Labor's Webpage at the following address: www.aot.state.vt.us/CivilRights/default.htm. Contractors that do not have access to the internet may obtain a copy from the Office of Contract Administration upon request.

2. CONTRACT COMPLETION DATE. This Contract shall be completed on or before May 22, 2015.

In accordance with this requirement, and with reference to Subsection 108.09(d), work will be allowed during the seasonal closure period from December 1, 2014 to April 15, 2015. The Contractor shall identify necessary winter work accommodations and gain written permission from the Engineer for all construction activities during this period. Cold weather concrete noted in Subsection 501.07 will not be allowed.

3. NOTICE TO BIDDERS. U.S. Department of Labor Davis-Bacon wage rates are applicable to this Contract. Copies of the applicable rates are included in this proposal.

4. CONTACT WITH THE AGENCY. From the time of advertising until the actual bid opening for this Contract, all prospective Contractors, subcontractors, and suppliers shall direct all inquiries related to this project solely to the Agency's Office of Contract Administration at (802) 828-2641. This number may also be accessed via the Agency's TTY/TDD Telecommunications Relay Service at 1-800-253-0191.

The deadline for submitting inquiries related to this project to the Office of Contract Administration is 4:30 p.m. Eastern Standard Time on February 7, 2014. No exceptions will be made to this requirement.

5. NOTICE TO BIDDERS - MANDATORY PRE-BID MEETING. Prospective Bidders/Contractors are hereby notified that there will be a mandatory pre-bid meeting for this project to be held at 1:00 p.m. Eastern Standard Time on January 24, 2014 at the Brookfield Town Clerk's Office located at 40 Ralph Road in Brookfield, VT.

Attendance at the pre-bid meeting is required prior to submitting a bid for this project.

Prospective Bidders/Contractors are encouraged to submit inquiries related to this project to the Agency's Office of Contract Administration before 4:30 p.m. Eastern Standard Time on January 20, 2014. Inquiries submitted by this time will be kept anonymous as to the author of the inquiry. Other questions will be taken on the date of the pre-bid meeting and following the pre-bid meeting until the deadline specified in Special Provision No. 4.

Prior to the bid opening date of February 14, 2014, the Agency's Office of Contract Administration will issue to Prospective Bidders/Contractors both a written summary of the pre-bid meeting and, if necessary, an addendum to the proposal documents.

6. NOTICE TO BIDDERS. The Contractor is hereby notified that in the absence of the Engineer, the Agency's Safety Officer and the Agency's Hazardous Materials and Waste Coordinator shall each have the authority to suspend work when they determine that a serious safety or environmental violation exists on the job site. The period of time work is suspended due to a serious safety or environmental violation will not be justification for an extension of time.
7. STANDARD SPECIFICATIONS. The provisions of the 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, as modified herein, shall apply to this Contract.
8. SUPPLEMENTAL SPECIFICATIONS AND CONTRACT REQUIREMENTS. The Contractor's attention is directed to the following specifications and contract requirements included in the Proposal form and effective for this Contract:

Required Contract Provisions for Federal-Aid Construction
Standard Federal EEO Specifications
VT Agency of Transportation Contractor Workforce Reporting Requirements
Workers' Compensation; State Contracts Compliance Requirement
General Special Provisions dated July 2, 2013
Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants
Vermont Minimum Labor & Truck Rates
Disadvantaged Business Enterprise (DBE) Policy Contract Requirements
U.S. Department of Labor Davis-Bacon Wage Rates
Asphalt Price Adjustment Provisions dated April 6, 2010
Lakes and Ponds Permit #BR00-0023 dated June 19, 2013
Army Corps of Engineers Category 1 Self-Verification Form
Army Corps of Engineers General Permit #NAE-2012-1167 dated December 6, 2012
Certification for Federal-Aid Contracts
Contractor's EEO Certification Form
Debarment & Non-Collusion Affidavit

9. NOTICE TO BIDDERS - CONTRACT INSURANCE REQUIREMENTS. The Contractor is hereby notified that in the event of a discrepancy between the stated insurance requirements of Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants and those of Subsection 103.04 of the Standard Specifications for Construction, the requirements of Subsection 103.04 of the Standard Specifications for Construction shall govern.
10. NOTICE TO BIDDERS - ADDITIONAL CONTRACT REQUIREMENT. For construction and transportation projects over \$250,000.00, a payroll process by which during every pay period the Contractor collects from the subcontractors or independent contractors a list of all workers who were on the jobsite during the pay period, the work performed by those workers on the jobsite, and a daily census of the jobsite. This information, including confirmation that Contractors, subcontractors, and independent contractors have the appropriate workers' compensation coverage for all workers at the jobsite, and similar information for the subcontractors regarding their subcontractors shall also be provided to the Department of Labor and to the Department of Banking, Insurance, Securities, and Health Care Administration, upon request, and shall be available to the public.

11. NOTICE TO BIDDERS. All temporary construction signs shall meet the following requirements:
- A. Where sign installations are not protected by guardrail or other approved traffic barriers, all sign stands and post installations shall meet National Cooperative Highway Research Program (NCHRP) Report 350 or the AASHTO Manual for Assessing Safety Hardware (MASH). The appropriate resource shall be determined as described in the MASH publication. No sign posts shall extend over the top of the sign installed on said post(s). When anchors are installed, stub shall not be greater than 100 mm (4 inches) above existing ground.
 - B. As a minimum, roll up sign material shall have ASTM D 4956 Type VI fluorescent orange retroreflective sheeting.
 - C. All post-mounted signs and solid substrate portable signs shall have ASTM D 4956 Type VII, Type VIII, or Type IX fluorescent orange retroreflective sheeting.
 - D. All retroreflective sheeting on traffic cones, barricades, and drums shall be at a minimum ASTM D 4956 Type III sheeting.
 - E. All stationary signs shall be mounted on two 4.5 kg/m (3 lb/ft) flanged channel posts or 51 mm (2 inch) square steel inserted in 57 mm (2 1/4") galvanized square steel anchors. No sign posts shall extend over the top edge of sign installed on said posts.
 - F. Prior to placing temporary work zone signs on the project, the Contractor must furnish for the Engineer's approval a detail for temporary work zone signs on steel posts showing stubs projecting a maximum of 100 mm (4 inches) above ground level and bolts for sign post.
 - G. Construction signs shall be installed so as to not interfere with nor obstruct the view of existing traffic control devices, stopping sight distance, and corner sight distance from drives and town highways.
 - H. Speed zones, if used, should be a maximum of 16 kph (10 mph) below existing posted speeds. Temporary speed limit certificates must be approved by the Director of Program Development.
12. NOTICE TO BIDDERS. All retroreflective sheeting on permanent signs (signs to remain after the project is completed) shall be at a minimum ASTM D 4956 Type III sheeting, unless otherwise shown on the Plans.
13. UTILITIES. Existing aerial facilities owned by Green Mountain Power Corporation and the Telephone Operating Company of Vermont (d/b/a FairPoint Communications) will be adjusted, as necessary, by employees or agents of the above company in accordance with the approximate aerial utility relocation route shown on the Plans.

The existing dry hydrant, in the southeast quadrant of the existing bridge, which is owned by the Town of Brookfield, will be adjusted, as necessary, by employees or agents of the Town of Brookfield.

Contacts for the above listed utility companies are:

Town of Brookfield:	John Benson	- (802)276-3352
FairPoint Communications:	Randy Chapman	- (802)295-8175
Green Mountain Power Corp.:	Carol Burke	- (802)234-5740, Ext. 192

The Contractor is advised that exploratory excavation to locate existing underground facilities may be necessary to protect these facilities from damage. Where approved by the Engineer, these utilities shall be located and/or exposed by methods such as air/vacuum excavation and/or hand digging to determine their exact location. This exploratory work shall be classified as Trench Excavation of Earth, Exploratory and payment will be made under Contract item 204.22

Employees or agents of the above listed companies are to be allowed free and full access within the project limits with the tools, materials, and equipment necessary to install, operate, maintain, place, replace, relocate, and remove their facilities.

There will be no extra compensation paid to the Contractor for any inconvenience caused by working around and with the companies or their facilities.

Act No. 86 of 1987 (30 VSA Chapter 86) ("Dig Safe") requires that notice be given prior to making an excavation. It is suggested that the Permit Holder or his/her contractor telephone 1-888-344-7233 at least 48 hours before, and not more than 30 days before, beginning any excavation at any location.

Should the Contractor desire additional adjustments of the utility facilities for his/her convenience, proper arrangements shall be made in conformance with Subsection 105.07 of the Standard Specifications for Construction.

14. HIGHWAY PARKING RESTRICTIONS. Only such trucks and equipment as are necessary for the construction of this project will be permitted to stop or park on the shoulders or right-of-way of the highway or intersecting highways. All trucks or equipment so stopped or parked shall be at least 1.2 m (4 feet) from the edge of the thru traffic lanes. Parking or stopping on the traveled portion of the roadway will not be permitted unless authorized by the Engineer to meet field conditions.

Private automobiles of workers will not be permitted to stop or park on the shoulders or right-of-way of the highway or intersecting highways.

Each of the Contractor's trucks or equipment used for the construction of this project and permitted to park or stop as provided above shall be equipped with flashing light signals on the front and rear and the signals shall be operating at all times when parked or stopped on the highway unless otherwise authorized by the Engineer.

The flashing light signals shall be visibly distinct from and physically separate from the hazard warning system required by Federal and State motor vehicle laws and regulations. At least one of these flashing light signals shall be visible to traffic approaching from any angle at all times.

Qualified traffic control personnel shall be employed whenever the Contractor's vehicles or equipment (including that which belongs to the individual workers) enter or leave the traffic flow. All movement, in or out of the traffic flow, shall be with the flow of traffic.

15. SPECIAL CONSTRUCTION REQUIREMENTS.

- A. Unless otherwise permitted in writing by the Engineer, the Contractor shall not work during the holiday periods for Memorial Day, July Fourth, and Labor Day. The Engineer shall give a written order designating the time of observance of these holidays and of any additional holidays required by the season, anticipated traffic, and local custom. As specified in Subsection 105.14, construction operations shall not be performed on any Sunday without the specific authorization of the Engineer.

Designated holiday periods shall begin at 12:00 noon on the day before the weekend or holiday, whichever applies, and shall end at 7:00 a.m. on the day after the holiday or the weekend, as appropriate.

- B. The Contractor shall maintain a safe access to all drives and intersecting side roads at all times during the construction of this project.
- C. Two-way radios shall be provided by the Contractor when requested by the Engineer for use by traffic control personnel. All costs for furnishing and using two-way radios will not be paid for directly, but will be considered incidental to Contract item 641.10.
- D. The Contractor shall have available on the project the current editions of the Manual on Uniform Traffic Control Devices (MUTCD) and the Standard Highway Signs and Markings (SHSM) Book. Information for obtaining these publications may be found at: <http://mutcd.fhwa.dot.gov/index.htm>.

ASPHALT PRICE ADJUSTMENT

16. SUPPLEMENTAL SPECIFICATION - ASPHALT PRICE ADJUSTMENT, dated April 6, 2010, is hereby made a new Subsection of the Specifications, superseding all previous editions and their modifications.
17. SUPPLEMENTAL SPECIFICATION - ASPHALT PRICE ADJUSTMENT, dated April 6, 2010, GENERAL REQUIREMENTS AND CONDITIONS, part (b) text, is hereby modified by being deleted in its entirety and replaced with text "NOT USED".

The index price for asphalt cement is \$569.00 per ton.

In addition to materials produced under Contract pay item(s) as allowed in GENERAL REQUIREMENTS AND CONDITIONS, part (a) of the Supplemental Specification, asphalt cement produced under Contract item 900.680 Special Provision (Bituminous Concrete Pavement, Small Quantity) will be included for adjustment.

If an emulsified asphaltic liquid is used in the Contract work under any Contract item subject to the Asphalt Price Adjustment provisions and that liquid is not included in the table under subpart (5) of PRICE ADJUSTMENT PROCEDURES of the Supplemental Specification, the ACEA as defined in subpart (5) for that liquid will be that as determined by averaging Contractor certified test results for the project.

SECTION 108 - PROSECUTION AND PROGRESS

18. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, is hereby modified by adding new subpart (11) as follows:

(11). The days from April 15th to December 1st, inclusive, on which the weather or condition of the ground caused suspension of the work.

SECTION 490 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

19. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby modified by deleting the fourth row (for "Dust Proportion") in its entirety and replacing it with the following:

Dust Proportion (Filler/Asphalt Ratio)	0.60 - 1.20 (Wet Sieve) (Dry Sieve for Production - Types IS and IIS: 0.50 - 1.20 Types IIIS, IVS, and VS: 0.50 - 1.00)
---	--

20. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby further modified by deleting the sixth row (for "Voids in Mineral Aggregate") in its entirety and replacing it with the following:

Voids in Mineral Aggregate (VMA)%	12.5 min.	13.5 min.	14.5 min.	15.5 min.	16.5 min.	17.5 min.
--------------------------------------	--------------	--------------	--------------	--------------	--------------	--------------

21. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby still further modified by deleting the ninth row (for "Voids Filled With Asphalt") in its entirety.
22. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby still further modified by deleting footnotes (3), (4), and (5) in their entirety.
23. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, is hereby modified by deleting the heading "Voids Filled With Asphalt (VFA)" and the equation " $VFA = 100 \times ((VMA - V_a)/VMA)$ " in the second paragraph.
24. 490.03 COMPOSITION OF MIXTURE, part (c) Mix Design, is hereby modified by deleting the phrase ", and a single percentage for VFA" in the first sentence of the third paragraph.
25. 490.03 COMPOSITION OF MIXTURE, part (d) Control of Mixtures, TABLE 490.03C - PRODUCTION TESTING TOLERANCES is hereby modified by deleting the seventh (last) row (for "VFA") in its entirety.

26. 490.03 COMPOSITION OF MIXTURE, part (d) Control of Mixtures, TABLE 490.03C - PRODUCTION TESTING TOLERANCES is hereby further modified by deleting footnote 2 in its entirety.

SECTION 652 - EROSION PREVENTION & SEDIMENT CONTROL PLAN

27. SECTION 652 - EROSION PREVENTION & SEDIMENT CONTROL PLAN, is hereby made a new Section of the Specifications as follows:

28. 652.01 DESCRIPTION. This work shall consist of designing, furnishing, and submitting for acceptance modifications to the Contract Erosion Prevention & Sediment Control Plan (hereinto known as the EPSC Plan), becoming a co-permittee with the Agency of Transportation, State of Vermont on associated permits, monitoring the EPSC Plan using an On-Site Plan Coordinator, and maintaining the erosion prevention and sediment control measures to ensure the effectiveness of the EPSC Plan.
29. 652.02 MATERIALS. Materials required for the field work maintenance of the EPSC Plan shall meet all requirements of the appropriate Section of the VAOT Standard Specifications for Construction.

Materials including manuals, checklists, forms, and other supporting documentation necessary to meet the requirements of these provisions and maintain compliance with associated permits shall be made available to the Engineer by the Contractor and maintained on site by the Contractor. Supporting documents associated with the requirements of General Permit 3-9020 are available upon request to ANR or from the ANR Stormwater web page. The VTrans Erosion Prevention and Sediment Control Plan Contractor Checklist and Low Risk Site Inspection Form are available from the VTrans Construction Environmental Engineer.

30. 652.03 QUALIFICATIONS. Modifications to the EPSC Plan shall be prepared and signed by a Licensed Professional Civil Engineer registered in the State of Vermont or a qualified professional in erosion prevention and sediment control, certified by CPESC, Inc. or equivalent, hereinafter called the "Preparer."
31. 652.04 EROSION PREVENTION & SEDIMENT CONTROL PLAN. The EPSC Plan, developed using a combination of structural, non-structural, and vegetative practices to adequately prevent erosion and control sedimentation, and meeting the requirements of the VTrans Erosion Prevention & Sediment Control Plan Designer Checklist (Non-Jurisdictional and Low Risk) or the Vermont Standards & Specifications for Erosion Prevention & Sediment Control based on area of disturbance and risk, has been included in the Contract Documents.

The Contractor shall use the EPSC Plan included in the Contract and, at the onset of construction as well as throughout the duration of the project, modify it to describe changing conditions and illustrate how the criteria of the determined risk will be upheld. For Non-Jurisdictional and Low Risk projects, the Contractor shall use the VTrans Erosion Prevention and Sediment Control Plan Contractor Checklist. For Moderate Risk projects, the Contractor shall modify the Contract EPSC Plan in accordance with the General Permit 3-9020 Parts 4 through 6. If a modification to the EPSC Plan at a Low or Moderate Risk project alters any criteria of the determined risk, an updated Risk Evaluation shall be prepared.

The Contractor may use the Agency's EPSC Plan sheet(s) as a basis for necessary modifications; however, if necessary to convey the sequential nature and phases of construction activities and associated erosion prevention and sediment control measures, several plan sheets showing successive site conditions are recommended.

All work shown in the EPSC Plan shall be included in the Contractor's CPM Progress Schedule, as required by Subsection 108.03.

32. 652.05 SUBMITTALS. Three sets of the modified EPSC Plan as well as the updated Risk Evaluation, stamped and signed by the Preparer, shall be submitted to the Construction Engineer as Construction Drawings in accordance with Section 105. Submittals shall occur after award of the Contract but not later than the Pre-Construction Conference to allow time for review by the Agency. An Acceptance Memo or comments will be provided to the Contractor within 10 working days.

The Contractor shall respond to comments as soon as possible, but not more than 10 days after the date of VTrans initial correspondence. Agency review time for response to comments will be completed within an additional 10 working days. Modifications or additions to the EPSC Plan will not be considered as an acceptable delay of the work under Subsection 108.11.

All subsequent modifications to the EPSC Plan and updates to the Risk Evaluation will be reviewed and forwarded to the ANR by the Agency as appropriate.

Construction activities for EPSC Plan modifications that do not require authorization from the ANR shall commence only after the EPSC Plan has been accepted by the Agency. Construction activities for EPSC Plan modifications that do require authorization from the ANR shall commence only after that authorization has been granted.

33. 652.06 MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN. The Contractor shall designate a person (On-Site Plan Coordinator) who is directly responsible for the on-site implementation of the EPSC Plan. This person shall generally be on-site on a daily basis during active construction and have the authority to halt construction activities if necessary. The On-Site Plan Coordinator shall have demonstrated experience in construction practices as they relate to erosion prevention and sediment control as well as a general understanding of State and Federal environmental regulations and permits pertaining to the National Pollutant Discharge Elimination System Construction Program. The On-Site Plan Coordinator shall be proficient at reading and interpreting engineering and EPSC plans. Preference will be given to a Licensed Professional Civil Engineer registered in the State of Vermont or a qualified professional in erosion prevention and sediment control, certified by CPESC, Inc. or equivalent. The qualifications of the On-Site Plan Coordinator shall be included in the EPSC Plan. The Engineer, if not satisfied with the performance of this individual, may at any time request a replacement.

During active construction and periods of inactivity, the On-Site Plan Coordinator shall be responsible for inspections and reporting.

- (a) Active Construction. Inspections shall occur once every seven calendar days and within 24 hours of the end of a storm event that results in a discharge of stormwater from the site. During the winter construction season (October 15th to April 15th, inclusive), inspections at all sites shall occur daily.

For Non-Jurisdictional and Low Risk projects, inspections shall be conducted using the Agency's EPSC Plan Inspection Report (Non-Jurisdictional and Low Risk Projects).

For Moderate Risk projects, inspections shall be conducted using the General Permit 3-9020 Inspection Report for Moderate Risk Projects referenced in the Permit and available upon award of the Contract.

Immediate action shall be taken to correct the discharges of sediment, including halting or reducing construction activities as necessary, until the discharge and/or the condition is fully corrected. Corrective actions shall be recorded on the monitoring reports and shown on the EPSC Plan. Each report shall be signed by the On-Site Plan Coordinator.

- (b) Inactive Construction. Periods such as shutdown during the winter season shall require inspection and reporting of erosion prevention and sediment control measures. The Contractor shall contact the Engineer prior to conducting any inspections. The inspections shall be conducted at least once every 30 days and within 24 hours of any storm or significant snow melt event that may cause stormwater runoff to leave the construction site. The Contractor shall provide, within 24 hours, the necessary personnel, equipment, and materials to repair or correct any deficiencies identified during inspection. All deficiencies and corrective measures taken shall be documented on the reports.

Copies of all reports shall be submitted to the Engineer within 24 hours of inspection or when corrective measures were taken. Copies of all reports shall be kept on site in the Contractor's project files.

34. 652.07 MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN. This work shall consist of providing all labor and equipment necessary for field maintenance of erosion prevention and sediment control items in the Contract, and providing materials and labor necessary for installing, monitoring, maintaining and, where necessary, removing additional measures needed to correct deficiencies that develop during construction that lessen the performance of the EPSC Plan. Erosion prevention and sediment control measures shall be maintained by the Contractor and removed when authorized by the Engineer. The Contractor shall establish vegetation in all areas disturbed during removal of the erosion prevention and sediment control measures.

Any maintenance required due to the failure of the Contractor to follow the EPSC Plan in its accepted form shall be performed at no additional cost to the Agency.

35. 652.08 METHOD OF MEASUREMENT. The quantity of EPSC Plan to be measured for payment will be on a lump sum basis in the complete and accepted work.

The quantity of Monitoring EPSC Plan will be measured to the nearest 1/4 hour for the actual number of authorized hours spent monitoring, reviewing, and reporting on the construction site(s), including waste, borrow and staging areas or other support activities, as it relates to the EPSC Plan. Travel time and other time not spent at the construction site(s) or time not authorized will not be measured for payment (i.e. travel expenses, clerical staff time, copying, miscellaneous expenses, overhead, etc.).

The quantity of Maintenance of EPSC Plan will be on a lump unit basis for all such field maintenance provided for in the Contract, excluding waste, borrow and staging areas or other support activities.

36. 652.09 BASIS OF PAYMENT. The accepted quantity of EPSC Plan will be paid for at the Contract lump sum price. Payment will be full compensation for the initial preparation of modifications, submittals, and all incidentals necessary to complete the work. Subsequent modifications to the EPSC Plan during Construction will be considered incidental to Contract item 652.10.

Partial payments will be made as follows:

- (a) The first payment of 50 percent of the lump sum price for the EPSC Plan will be paid for upon acceptance of the EPSC Plan for the entire project.
- (b) The second payment of 35 percent of the lump sum price for the EPSC Plan will be made on the first estimate following the completion of 50 percent of the project.
- (c) The third payment of 15 percent of the lump sum price for the EPSC Plan will be made when the project is substantially complete.

The accepted quantity of Monitoring EPSC Plan will be paid for at the Contract unit price per hour. Payment will be full compensation for performing the work specified. Payment will not be made unless a report for the monitoring is submitted to and accepted by the Engineer.

The accepted quantity of Maintenance of EPSC Plan will be paid for as specified for force account work in Subsection 109.06. Payments will be drawn against the Contract Lump Unit amount. To provide a common proposal for all bidders, the Agency has entered an amount in the proposal to become part of the Contractor's total bid. Maintenance related to material supply and disposal areas shall be performed in accordance with Subsection 105.29.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
652.10 EPSC Plan	Lump Sum
652.20 Monitoring EPSC Plan	Hour
652.30 Maintenance of EPSC Plan (N.A.B.I.)	Lump Unit

SECTION 900 - SPECIAL PROVISION ITEMSAGGREGATE SURFACE COURSE, SIDEWALK/TRAIL

37. DESCRIPTION. This work shall consist of furnishing and placing a wearing course of approved aggregate on a prepared surface.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 401 of the Standard Specifications.

38. MATERIALS. Aggregate for Aggregate Surface Course, Sidewalk/Trail shall meet the gradation requirements of the following table as determined in accordance with AASHTO T 27 and AASHTO T 11:

TABLE A - AGGREGATE SURFACE COURSE, SIDEWALK/TRAIL

Sieve Designation	Percentage by Mass (Weight) Passing Square Mesh Sieves
12.5 mm (1/2 inch)	100
9.5 mm (3/8 inch)	80 to 100
4.75 mm (No. 4)	60 to 90
1.18 mm (No. 16)	20 to 40
600 μ m (No. 30)	14 to 30
300 μ m (No. 50)	10 to 25
150 μ m (No. 100)	8 to 15
75 μ m (No. 200)	0 to 10

39. PLACING. The maximum layer thickness for placement of Aggregate Surface Course, Sidewalk/Trail shall be 75 \pm 10 mm (3 \pm 1/2 inches) after compaction.
40. METHOD OF MEASUREMENT. The quantity of Special Provision (Aggregate Surface Course, Sidewalk/Trail) to be measured for payment will be the number of cubic meters (cubic yards) used in the complete and accepted work, as determined by the Plan dimensions of the compacted material or as ordered by the Engineer. No allowance will be made for material placed to a depth greater than that shown on the Plans unless ordered by the Engineer.
41. BASIS OF PAYMENT. The accepted quantity of Special Provision (Aggregate Surface Course, Sidewalk/Trail) will be paid for at the Contract unit price per cubic meter (cubic yard). Payment will be full compensation for performing the work specified and for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Water used for obtaining the required compaction will not be paid for separately but will be considered incidental to Special Provision (Aggregate Surface Course, Sidewalk/Trail).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.608 Special Provision (Aggregate Surface Course, Sidewalk/Trail)	Cubic Yard

BEARING DEVICE ASSEMBLY, FLOATING BRIDGE

42. DESCRIPTION. This work shall consist of detailing, fabricating, furnishing, and installing bridge bearing devices on a floating bridge.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 531 of the Standard Specifications.

43. MATERIALS.

(a) Steel Components. Steel plates and shapes used for fabrication shall be Austenitic stainless steel conforming to ASTM A 240/A 240M or A 276, as applicable, and shall be hot-finished with a minimum yield strength of 30 ksi and minimum tensile strength of 70 ksi.

(b) Hardware. Bolts, screws, anchor rods, and associated nuts and washers shall be stainless steel conforming to ASTM F 593, Alloy Group 1, 2, or 3, Condition CW, with a minimum yield strength of 43 ksi and minimum tensile strength of 75 ksi.

44. WELDING. All weld design details, quality of work, procedures, and inspection of welding shall conform to the requirements of AWS D1.6 Structural Welding Code - Stainless Steel and Subsection 506.10. Field welding will not be allowed.

45. METHOD OF MEASUREMENT. The quantity of Special Provision (Bearing Device Assembly, Floating Bridge) to be measured for payment will be the number of units used in the complete and accepted work. All bearing device components and anchor bolt assemblies will be included as part of the measured unit. Anchor bolt assemblies include bolts, threaded rods, nuts, washers, drilling, and grouting required for installation of bearing devices.

46. BASIS OF PAYMENT. The accepted quantity of Special Provision (Bearing Device Assembly, Floating Bridge) will be paid for at the Contract unit price for each. Payment will be full compensation for detailing, furnishing, handling, transporting, and placing the materials specified, including surface preparation, anchor bolt assemblies, drilling for anchor bolts, mortar, preformed fabric bearing pads, bearing device components, sole plate assemblies and hardware for connecting sole plate assemblies to structural glued laminated beams, welding, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Bearing Device Assembly, Floating Bridge)	Each

GRANITE BOLLARD

47. DESCRIPTION. This work shall consist of furnishing and installing granite bollards as detailed in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 619 of the Standard Specifications.

48. MATERIALS. Materials shall meet the following requirements:

(a) Concrete. Concrete shall meet the requirements of Section 541 for Concrete, Class A.

(b) Granite Bollard. Granite Bollards shall consist of hard, durable, quarried granite. Bollards shall be gray in color, free from seams, cracks, or other structural defects, and shall be of a smooth pebbled character. The bollard may contain natural color variations that are characteristic of the granite source.

(1) Source. The Contractor shall submit for approval the name of the quarry that is the proposed source of the granite for bollard materials. Such submission shall be made sufficiently in advance of ordering so that the Engineer may have the opportunity to judge the stone, both as to quality and appearance. Samples of bollards shall be submitted for approval only when requested by the Engineer.

(2) Finish and Surface Dimensions. The individual bollard stones shall be of the dimensions shown in the Plans and shall be of uniform width and depth along the length of the bollard.

Each arris line along the length of the bollard shall be rounded to a 13 mm (1/2 inch) radius.

The finishing of the bollards shall be saw cut and either sandblasted or thermal finished on all exposed sides. Each face shall be at right angles to the plane of the adjacent face. Drill holes shall not be permitted in any face unless otherwise shown in the Plans. Each face of each bollard shall have no projections greater than 25 mm (1 inch) or depressions greater than 13 mm (1/2 inch), measured from the vertical plane of the face.

The ends of the bollard stones shall be square to the faces of the bollard.

49. CONSTRUCTION REQUIREMENTS. Granite Bollards shall be constructed to the configuration shown in the Plans.

50. METHOD OF MEASUREMENT. The quantity of Special Provision (Granite Bollard) to be measured for payment will be the number of granite bollards installed in the complete and accepted work.

51. BASIS OF PAYMENT. The accepted quantity of Special Provision (Granite Bollard) will be paid for at the Contract unit price per each. Payment will be full compensation for furnishing, transporting, handling, assembling, and placing the materials specified, including concrete foundations, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment for surface course and subbase materials will be made separately under the appropriate Contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Granite Bollard)	Each

STAINLESS STEEL SHELF

52. DESCRIPTION. This work shall consist of detailing, fabricating, furnishing, and installing stainless steel ledges at the locations indicated in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 506 of the Standard Specifications.

53. MATERIALS.

- (a) Steel Components. Steel plates and shapes used for fabrication shall be Austenitic stainless steel conforming to ASTM A 240/A 240M or A 276, as applicable, and shall be hot-finished with a minimum yield strength of 30 ksi and minimum tensile strength of 70 ksi.

Stainless steel plates and shapes shall be Charpy V-notch tested in accordance with AASHTO T 243. The results of the test shall have a minimum average energy of 23 ft-lbf at 40°F.

- (b) Hardware. Bolts, nuts, and washers shall be stainless steel conforming to ASTM F 593, Alloy Group 1, 2, or 3, Condition CW, with a minimum yield strength of 43 ksi and minimum tensile strength of 75 ksi.

54. WELDING. All weld design details, quality of work, procedures, and inspection of welding shall conform to the requirements of AWS D1.6 Structural Welding Code - Stainless Steel and Subsection 506.10. Field welding will not be allowed.

55. METHOD OF MEASUREMENT. The quantity of Special Provision (Stainless Steel Shelf) to be measured for payment will be for each shelf installed in the complete and accepted work.

56. BASIS OF PAYMENT. The accepted quantity of Special Provision (Stainless Steel Shelf) will be paid for at the Contract unit price for each. Payment will be full compensation for detailing, furnishing, handling, transporting, welding, and installing the materials specified, including HSS members, angles, web shelf support plates, and all bolts, washers, and nuts required to construct the shelf and attach the shelf to the FRP Pontoon; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Stainless Steel Shelf)	Each

WINTER TRAFFIC BARRIER

57. DESCRIPTION. This work shall consist of furnishing, fabricating, treating, transporting, installing, and removing winter traffic barrier at the locations indicated in the Plans and as directed by the Engineer.
58. MATERIALS.
- (a) Timber. Timber shall conform to the requirements of Subsection 728.01.
- (b) Hardware. Bolts, nuts, and washers shall be stainless steel conforming to ASTM F 593, Alloy Group 1, 2, or 3, Condition CW.
59. GENERAL REQUIREMENTS.
- (a) Fabrication. Ensure timber used is straight, sawed square at the ends, and has opposite sides parallel. Cut individual timber members to proper length and drill all bolt holes prior to treatment.
- (b) Construction. Winter traffic barrier shall be temporarily installed to ensure proper fit. Following acceptance by the Engineer, winter traffic barrier shall be removed by the Contractor and become the property of the State.
60. METHOD OF MEASUREMENT. The quantity of Special Provision (Winter Traffic Barrier) to be measured for payment will be the number of each barrier installed and removed in the complete and accepted work.
61. BASIS OF PAYMENT. The accepted quantity of Special Provision (Winter Traffic Barrier) will be paid for at the Contract unit price per each. Payment will be full compensation for furnishing, fabricating, treating, transporting, installing, and removing the materials specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment for granite bollards will be made separately under Contract item 900.620 Special Provision (Granite Bollard).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Winter Traffic Barrier)	Each

EXPANSION DEVICE, HINGED SLIDING PLATE ASSEMBLY

62. DESCRIPTION. This work shall consist of detailing, fabricating, furnishing, and installing steel hinged sliding plate assembly expansion devices at the locations indicated in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 516 of the Standard Specifications.

63. MATERIALS.

(a) Steel Components. Steel plates, pipes, and rods used for fabrication shall be stainless steel conforming to ASTM A 240/A 240M or ASTM A 312, as applicable, and shall be hot-finished with a minimum yield strength of 30 ksi and minimum tensile strength of 70 ksi.

(b) Hardware. Hardware shall be stainless steel conforming to ASTM F 593, Alloy Group 1, 2, or 3, Condition CW, with a minimum yield strength of 43 ksi and minimum tensile strength of 75 ksi.

64. GENERAL REQUIREMENTS.

(a) Fabrication. Steel plates used in the construction of the hinged sliding plate assemblies shall be accurately cut to the true shape and alignment detailed in the Plans. All edges and corners shall be ground free of burrs.

(b) Welding. All weld design details, quality of work, procedures, and inspection of welding shall conform to the requirements of AWS D1.6 Structural Welding Code - Stainless Steel and Subsection 506.10. The top surface of the plate-to-pipe weld shall be ground flush. Field welding will not be allowed.

(c) Construction. Expansion devices shall be constructed to the configuration shown in the Plans.

65. METHOD OF MEASUREMENT. The quantity of Special Provision (Expansion Device, Hinged Sliding Plate Assembly) to be measured for payment will be the number of meters (linear feet) used in the complete and accepted work, measured along its centerline.

66. BASIS OF PAYMENT. The accepted quantity of Special Provision (Expansion Device, Hinged Sliding Plate Assembly) will be paid for at the Contract unit price per meter (linear foot). Payment will be full compensation for detailing, furnishing, handling, transporting, welding, and placing the materials specified, including surface preparation and bolts, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.640 Special Provision (Expansion Device, Hinged Sliding Plate Assembly)	Linear Foot

FIBER REINFORCED POLYMER PONTOONS

67. DESCRIPTION. This work shall consist of designing, detailing, fabricating, furnishing, and installing Fiber Reinforced Polymer (FRP) Pontoons.
68. DEFINITIONS. The following definitions provide a basis of terms used throughout these provisions. Additional terms not uniquely defined below shall be in accordance with ASTM D3878.

Ballast - A material use to provide stability and targeted density to a floating structure.

Fiber Reinforced Polymer (FRP) - A thermoset polymer (resin) matrix reinforced with fiber or other material with a sufficient aspect ratio (length to thickness) to provide a discernible reinforcing function.

Lamina - A subunit of a laminate consisting of one or more adjacent plies of the same material with identical orientation.

Laminate - Any fiber-reinforced or fabric-reinforced composite consisting of laminae (plies) with one or more orientations with respect to some reference direction.

Ply - The constituent single layer used in fabricating a composite structure.

Pontoon - An individually fabricated water-tight FRP cellular structure.

Raft - A transverse grouping of individual FRP pontoons to form a flotation device that is nominally 23 feet wide, 3 feet deep, and 51 feet long.

Vacuum-Assisted Resin Transfer Molding (VARTM) - A technique that uses vacuum pressure to draw resin into a mold.

69. MATERIALS.

- (a) Resin. Bisphenol-A epoxy-vinyl ester or durable marine grade epoxy based resins shall be used; no other resins will be accepted for use. A maximum of 10% styrene by weight will be allowed to be added to the base resin mixture which itself may already contain styrene. The selected resin shall contain a minimum of 0.30% by weight UV-9 as a UV stabilizer.

The color of the resin shall be gray and in close conformance with Federal Standard 595 Color 26357.

A Type B Certification in accordance with Subsection 700.02 shall be furnished for the resin used in fabrication and all components intended to be added to the resin mixture prior to infusion.

- (b) Fiber Reinforcement. Reinforcement shall be an electrical grade glass (E-glass) fabric and shall be in the form of continuous roving, woven roving, stitched, or surface matting.

A Type A Certification in accordance with Subsection 700.02 shall be furnished for each type and delivery of E-glass used in the manufacture of the pontoons.

- (c) Structural Steel. Structural steel shall meet the requirements of Section 714 for AASHTO M 270M/M 270, Grade 50 steel. Steel plates shall be Charpy V-notch tested in accordance with Subsection 714.01. Steel shall be hot dip galvanized following fabrication in accordance with Subsection 726.08.
- (d) High-Strength Bolts, Nuts, and Washers. Hardware used to connect structural steel field splices to the FRP pontoons shall meet the requirements of Subsection 714.05. Hardware shall meet the requirements of ASTM A325, Type I and be mechanically galvanized in accordance with AASHTO M 298, Class 50, Type I.
- (e) Threaded Rods. Threaded rods shall meet the requirements of ASTM A615, Grade 75. Nuts shall be in accordance with ASTM A108 and washers shall be in accordance with ASTM F436. Bearing plates shall meet the requirements of AASHTO M 270M/M 270, Grade 36. All components comprising the threaded rod assembly shall be hot dipped galvanized following fabrication in accordance with Subsection 726.08. Threads along the threaded rods only need to be present near the anchor locations for proper installation.

A Type D Certification in accordance with Subsection 700.02 shall be furnished for all components comprising the threaded rod assembly.

- (f) Closed Cell Foam. Closed cell foam shall be expanded polystyrene (EPS), polyisocyanurate, or rigid spray-applied polyurethane meeting the following requirements:

Physical Property	Requirement	Test Method
Water Absorption	3% max.	ASTM D2842
Compressive Strength @ 10% Strain (psi)	< 30 psi	ASTM D1621

A Type D Certification in accordance with Subsection 700.02 shall be furnished for the closed cell foam is required in accordance with Standard Specification 700.02.

- (g) Ballast. Ballast material shall be free of voids and of uniform density, such as concrete or galvanized steel. The selected ballast material shall not be reactive with surrounding FRP or foam components in dry or humid/wet environments.

70. SUBMITTALS. The Contractor shall submit Design Computations, Design Drawings, FRP test sample results, and Fabrication Drawings in accordance with Section 105 and these provisions. Submittals and review periods shall be as follows:

- (a) Design Computations and Design Drawings. The Contractor shall submit design calculations and Design Drawings to the Agency that identify the proposed pontoon design, materials to be used, and verify that all Contract requirements are met. The Agency shall have four (4) weeks to review the submitted information. After the review period, the Contractor shall incorporate all comments and resubmit, if necessary. Any subsequent Agency review period shall be two (2) weeks.

- (b) FRP Test Sample Results. After acceptance of the Design Computations and Design Drawings submittal, results of the FRP test samples as outlined in these provisions shall be submitted to the Agency for review. The Agency review period for this interim submittal shall be two (2) weeks.
- (c) Fabrication Drawings. After acceptance of FRP test sample results, Fabrication Drawings shall be submitted to the Agency for review. Fabrication Drawings shall fully detail all aspects of work, material, and processes necessary to fabricate the pontoons to the requirements of the Contract Documents. The Agency shall have four (4) weeks to review the submitted information. After the review period, the Contractor shall incorporate all comments and resubmit, if necessary. Any subsequent Agency review period shall be two (2) weeks.

The Design Computations and Design Drawings shall be sealed by a Professional Engineer licensed in the State of Vermont. In addition to the requirements of Section 105, the following shall be included within the appropriate submittal:

- (a) The dimensions of the sections to be fabricated.
- (b) Ballast material, thickness, and location(s).
- (c) FRP laminate layup design(s), including:
- (1) Resin chemical composition, including additive types, names, and source of materials.
 - (2) Fiber types, including weave type, weights, orientations, and source of material.
 - (3) Target fiber to resin volume fraction ratios.
 - (4) Glass fabric piece dimensions, including any necessary cut-outs for bolt holes and other details.
- (d) The infusion process, including intended vacuum pressure, anticipated draw time, number, spacing, and location of infusion and evacuation ports, anticipated cure temperature, and cure time.
- (e) The method of keying or roughening adjoining surfaces of adjacent pontoons. The adjoining surfaces of adjacent pontoons shall be keyed or roughened through the use of sandblasting, acid etching, adhesively-applied silica grit, or other method approved by the Engineer. If adjoining surfaces are keyed, the shear key shall be designed to meet the requirements of these provisions. If adjoining surfaces are roughened, the surface friction shall meet the requirements specified in Table I.

- (f) Lab data test results proving required design strengths, stiffnesses, and other properties listed in the following table for each unique FRP laminate or equivalent partial thickness laminate intended for use in the fabrication of the pontoons shall be submitted. Strengths and stiffnesses listed in Table I are minimum requirements, regardless of design requirements. The strengths and stiffnesses required by the Fabrication Engineer's design in excess of those noted in Table II shall become the minimum benchmark for proof tests. The average value of all samples for each test shall exceed the required design value and no individual sample shall be more than 10% lower than the required value. Historic test results may be used provided the samples tested meet all Project requirements, are representative of the laminates needed by design, and test results are less than 5 years old.

Testing for the FRP materials shall be completed at an ISO 17025 certified laboratory approved the Materials and Research Engineer. The approval shall be based upon evidence of a satisfactory Quality System Manual for laboratory operations including systems that report equipment condition and calibration, training, and qualification procedures for employees conducting tests under this Contract. The laboratory must demonstrate compliance with a reasonable schedule for maintenance and calibration of the equipment used in each of the methods, technician proficiency documents (that include training if this is a limited experience staff person), and a narrative that explains sample handling, test result review and reporting, and explanation of chain of custody for the samples.

Revised February 11, 2014

Testing shall be in accordance with these provisions and shall include, at a minimum, 10 coupon tests of each of the Fabricator-proposed laminates or equivalent partial thickness, if necessary, as follows:

Table I - Prefabrication Proof Testing Requirements		
Physical/Mechanical property	Requirements	ASTM Test Method
Barcol Hardness	> 40	D2583
Water Absorption	< 0.7%	D570
Density	Within $\pm 5\%$ of theoretical design value	D792
Coefficient of Thermal Expansion (Longitudinal)	< 8×10^{-6} in/in/ $^{\circ}$ F	D696
Coefficient of Friction for Adjoining Pontoon Surfaces	> 0.45 (Wet Conditions)	D1894
Fiber Volume Fraction	> 45% by volume	D2584
Tensile Strength	Longitudinal	> 30 ksi
	Transverse	> 15 ksi
Tensile Modulus	Longitudinal	> 2,000 ksi
	Transverse	> 1,500 ksi
Compressive Strength	Longitudinal	> 30 ksi
	Transverse	> 15 ksi
Compressive Modulus	Longitudinal	> 1,800 ksi
	Transverse	> 1,400 ksi
Flexural Strength	Longitudinal	> 35 ksi
	Transverse	> 20 ksi
Flexural Modulus	Longitudinal	> 1,800 ksi
	Transverse	> 1,400 ksi
In-plane Shear Strength	> 12 ksi	D5379
In-plane Shear Modulus	> 600 ksi	D5379
Interlaminar Shear Strength	> 3.5 ksi	D2344
Pin Bearing Strength ¹	> 20 ksi	D953

¹Pin bearing strength tests shall be conducted with the bolt sizes and types identified in the Plans and the FRP plates intended for use in the fabrication of the pontoons. The 4% deformation criteria noted in ASTM D953 shall be ignored and the tests shall be carried through and reported at ultimate failure.

- (g) The design of lifting attachments and corresponding stresses imposed upon the pontoons during handling operations.
- (h) Intended method of transportation, handling, and storage details.
- (i) The intended installation/erection procedure including methods of post-tensioning with certified calibration charts for intended torque wrench. The erection procedure shall identify stresses imposed on the pontoons and connections due to handling and placement to ensure no damage will be sustained during erection operations.
- (j) Within 45 calendar days following Contract Award, the Fabricator shall submit to the Agency a Quality Control Quality Assurance (QCQA) Plan for the fabrication of the FRP Pontoons. The QCQA Plan shall demonstrate the Fabricator's ability and commitment to produce FRP Pontoons to the requirements of this project. A satisfactory QCQA Plan shall, at a minimum, identify:
 - (1) Quality Control personnel involved in the project.

- (2) Inspection procedures, methods of monitoring and logging fabrication and curing of the pontoons, and hold points during fabrication.
- (3) Corrective action procedures for both the fabrication facility and project site.
- (4) Methods (NDE or other) and frequency of evaluating full wetting, full cure, plate thickness, and other tolerances required herein.

Fabrication of the pontoons and/or the test panels shall not commence until the QCQA Plan has been approved by the Agency.

71. DESIGN REQUIREMENTS. The FRP pontoons shall be designed by a Professional Engineer licensed in the State of Vermont. The Fabrication Engineer shall take full responsibility for the FRP component design including, but not limited to, FRP wall thickness determination, stiffener layout and size, connection capacity for bolted steel components, and any other aspect that defines the overall FRP pontoon geometry, strength, and performance.

(a) Design References. The design shall be in accordance with the latest editions of the following documents, in prevailing order:

- (1) Criteria noted within these provisions and the Plans
- (2) AASHTO LRFD Bridge Design Specifications (AASHTO)
- (3) 2010 VTrans Structures Design Manual (SDM)
- (4) ASCE Pre-Standard for Load & Resistance Factor Design (LRFD) of Pultruded Fiber Reinforced Polymer (FRP) Structures (Final)
- (5) VTrans 2011 Standard Specifications for Construction

(b) Design Demands. Design demands are depicted in the Plans in the form of global design forces and localized connection forces. All loading information within the Plans include applicable dynamic load allowances, multiple presence factors, load modifiers, and load factors in accordance with Load and Resistance Factor Design (LRFD) methodology.

Moment, shear, and torsion diagrams provided in the Plans account for controlling live load placement and combinations of vehicular and pedestrian loading as well as reactions from the approach ramps.

The bridge will be closed during winter months and therefore winter conditions (ice and snow loads) need not be considered simultaneously with vehicular or pedestrian live loads.

Vessel collision, thermal gradients, and snow drift loading need not be considered.

- (c) Reduction and Resistance Factors. The following reduction and resistance factors shall be applied to the nominal strength and/or stiffness (where appropriate) of members:
- (1) Moisture Reduction Factors (C_M).
Component Strength = 0.85
Component Stiffness = 0.95
 - (2) Temperature Reduction Factors (C_T). A temperature reduction factor shall not be considered for either strength or stiffness considerations.
 - (3) Time Effect Factors (λ). Component capacities shall be reduced by time effect factors as follows:
Service Load Combinations = 1.0
Extreme Event Load Combinations = 1.0
Strength Load Combinations = 0.90 (with Live Load)
= 0.40 (Dead Load Only)
 - (4) Resistance Factors (ϕ). Resistance factors shall be in accordance with the ASCE Pre-Standard for Load & Resistance Factor Design (LRFD) of Pultruded Fiber Reinforced Polymer (FRP) Structures (Final).
- (d) Design Loads. The following project specific loading conditions, as they deviate from AASHTO and/or the VTrans SDM, shall be considered:
- (1) Dead Load (DC). Density of FRP shall be per Fabrication Engineer's design.
 - (2) Ice Load (IC). Only horizontal static ice loads shall be considered; vertical (gravity) ice loads due to hanging ice shelves and dynamic ice loads due to floating ice sheets need not be considered.

The static ice pressure shall be as shown in the Plans, act normal to the applied surfaces, and be applied simultaneously to both sides of the bridge. Ice loads are considered to be an Extreme Event load combination and therefore resistance factors (ϕ) need not be applied.
- (e) Longitudinal Shear Key. If a shear key is used between adjoining pontoons, the shear key shall be designed for a distributed, factored shear force of 0.75 kips/ft. The shear key shall have a minimum root height of 18 inches and a minimum depth equal to 1.5 times the adjoining wall thickness.

- (f) Physical Constraints. A finished FRP raft section shall meet the physical constraints specified in Table II. The raft weight requirements of Table I shall account for the maximum and minimum anticipated weights of the FRP components, dry weight of closed cell foam, and ballast. Ballast material, if used, shall be located beneath the closed cell foam and be equally distributed across the width and length of each raft. Long term water absorption need not be considered when meeting the requirements of Table II.

Stiffness properties of the closed cell foam and ballast shall not be considered when meeting the requirements of Table II. Design stiffness properties shall be adjusted by the appropriate Moisture and Temperature Reduction Factors in accordance with this Subsection when meeting the limitations of Table II. Maximum stiffness properties identified in Table II need not apply to the Field Splice Connection Zone Regions identified in the Plans.

Table II - FRP Raft Physical Constraints		
	Minimum	Maximum
Raft Weight (lb)	22,000	33,000
Vertical Bending Stiffness, $E \cdot I_x$ (kip*in ²)	260,000,000	355,000,000
Plate Thickness (in)	1/2	N/A
Vertical Neutral Axis Location, Measured from Bottom Fiber (in)	16	20

Overall FRP raft length, width, and depth shall be in general accordance with the Plans. The minimum number of longitudinal cells within a raft, as seen in a transverse section, shall be four (4). The minimum number of transverse cells within a pontoon, as seen in a longitudinal section, shall be four (4).

Adjacent pontoons shall be match-cast to ensure proper fit up and mechanically fastened through the use of full width, continuous threaded rods as shown in the Plans or other method approved by the Engineer.

- (g) FRP Layup Requirements. The minimum fiber density shall be 45% by volume. All FRP plates shall be comprised of a balanced and symmetric layup.

The orientation of the fibers within a given laminate shall be proportioned such that the amount of fibers by weight oriented in the 0° bias (longitudinal direction) and the 90° bias (transverse direction) do not differ by more than 20% and no less than 15% of fibers by weight or two layers minimum are oriented in each of the plus and minus 45° biases. At bolt hole locations, the laminate shall incorporate a minimum of four layers of both plus and minus 45° biases, two of which shall be positioned on laminate extremes. A maximum of 10% of fibers by weight may be comprised of randomly oriented strand mat to provide stability to the fabric. Additional non-structural layers of glass veil may be placed between the structural glass layers and form surfaces to enhance resin infusion.

Lap splices in the glass fabrics will be permitted as follows:

- (1) The minimum lap length shall be 4 inches.
- (2) Lap splices will not be allowed within 3 feet of bolted connection locations.
- (3) Lap splices shall be staggered a minimum of 2 feet within a given lamina.
- (4) Lap splices within the same fabric run shall be a minimum of 10 feet apart.
- (5) No more than 2 lap splices will be allowed at any given location within a laminate.
- (6) All lap splice locations shall be shown on the approved Working Drawings.

72. INSURANCE. The Contractor shall require its designer(s) or subconsultant(s) that engage in design work for the FRP pontoons as required by these provisions to maintain Engineers Professional Liability Insurance with a minimum limit of liability of \$2,000,000 Annual Aggregate and \$2,000,000 per claim. "Design Work" includes all work that requires design computations. This policy shall cover "Wrongful Acts," meaning negligent acts, errors, or omissions by the Contractor or any entity for whom the Contractor is legally liable, arising out of the performance of, or failure to perform, professional services.

No warranty is made that the coverages and limits required are adequate to cover and protect the interests of the Contractor for the Contractor's operations. These are solely minimums that must be met to protect the interests of the State.

73. GENERAL FABRICATION REQUIREMENTS.

- (a) Fabricator. The Fabricator shall be able to satisfy and provide verification of the following qualifications:
- (1) A record of manufacturing and fabricating structural FRP products with the VARTM for a minimum of five years;
 - (2) Demonstrate successful project completion of at least three different industrial or commercial structural projects with magnitudes and complexities similar to this project;
 - (3) An average of no less than 15 full time employees over a 3 year period;
 - (4) A minimum of 40 years combined FRP experience between the President, Technical Leader, Inspector, and Plant Manager, or similar titles;
 - (5) A licensed Engineer available on-site as necessary with mechanical or structural engineering background.

The following have been identified as allowable fabricators of FRP pontoons for this project. The Contractor may utilize fabricator(s) not listed below provided the selected fabricator meets all requirements and qualifications specified herein.

Composite Advantage
401 Kiser Street
Dayton, Ohio 45404
Contact: Scott Reeve
Tel.: (937)723-9031
Fax: (937)723-9034

Kenway Corporation
681 Riverside Drive
Augusta, Maine 04330-9714
Contact: Jake Marquis
Tel.: (207)622-6229
Fax: (207)622-6611

Harbor Technologies, LLC
8 Business Parkway
Brunswick, Maine 04011
Contact: Reid Potter
Tel.: (207)725-4878
Fax: (207)721-0971

The Contractor shall submit verification of all required qualifications regardless of the Fabricator selected.

- (b) Material Fabrication Facilities. Fabrication facilities shall be enclosed, temperature controlled, and of sufficient space to fabricate the project required pontoons and store unused products. The fabrication facility shall have dedicated, hard-plumbed vacuum piping and pump. An office at the fabrication facility with desk, chair, high speed internet connection, printer, and telephone shall be made exclusively available for Agency personnel during the production of the FRP pontoons.
- (c) Pre-Production Meeting. A pre-production meeting shall be held a minimum of seven (7) calendar days prior to beginning the VARTM process. At a minimum, the pre-production meeting shall be attended by the Fabrication Supervisor, Plant Manager, Plant Inspector or Inspector's Supervisor, Fabrication Engineer, and Agency representative. The pre-production meeting shall discuss mold preparation, preform layup, vacuum testing prior to infusion, resin preparation, resin promotion, potential problems to track during production, curing, de-molding, and storing finished products.
- (d) Forms. Forms shall be capable of molding the pontoons to the dimensions required by the Contract Documents and the Fabrication Engineer's design within all tolerances and shall be supported without the use of ties or spreaders within the body of the finished member. Interior forms (closed-cell foam regions) shall be accurately positioned as shown in the Plans and secured to prevent displacement during vacuum infusion. The forms shall be designed to facilitate an airtight chamber capable of withstanding vacuum pressures needed for the infusion process.

Revised February 11, 2014

Form surfaces shall be sufficiently rigid such that they will remain true to shape under the vacuum infusion pressures. Forms shall be free from rust, grease, or other foreign matter.

Any defects or damage to the finished FRP products due to form work, stripping, or handling may be cause for rejection. Holes and block outs for connections and any other related details shown in the Plans shall be provided for in the members. Holes for bolted connections may be drilled after fabrication. Cutting of finished FRP pontoons, other than drilling bolt holes, will not be allowed.

- (e) Closed Cell Foam. Rigid closed cell foam shall be cut to the dimensions shown in the approved Fabrication Drawings. Foam shall fit tightly to the interior of the pontoons without causing pressure on the walls. Gaps between the closed cell foam and adjacent RP walls greater than 1/8 inch shall be filled with spray-applied foam, approved by the Engineer. Spray-applied foam shall be applied in accordance with the manufacturer's recommendations.

Closed cell foam may be used as formwork for the FRP pontoons provided proper protection is provided to prevent chemical reaction and/or thermal breakdown of the foam due to resin application, and shall be removable to allow inspection of interior walls.

- (f) Fabric Preparation. Glass fabrics shall be sheared to the shapes and dimensions indicated on the approved Working Drawings, including any cut-outs necessary for bolt holes or other details. The fabrics shall be cut on a clean cutting surface, free of any deleterious material that could adhere to the fabric. Any cutting of rovings within a piece of glass fabric that exceeds 5% of the dimension parallel to the line of the cut may be rejected.
- (g) Vacuum Infusion. Resin shall not be drawn in to the forms until the Agency representative has approved the formwork and planned infusion process. Approval of the forms and infusion process by the Agency in no way relieves the Fabricator of achieving the required tolerances and design requirements set forth in these provisions. Prior to introducing the resin in the forms, the Fabricator shall fully seal the forms and demonstrate that the sealed form can maintain a vacuum pressure equal to that planned for infusion, with no more than a 5% drop in vacuum pressure over a five minute period.

Chemical additives and catalysts to be combined with the resin shall be measured by weight, or the corresponding volume, based on the batch weight of the resin. The Fabricator shall maintain a log of each batch of resin and the weights or volumes of each constituent material included in each batch. Once a batch of resin has been catalyzed, it must be thoroughly mixed and placed in the infusion tank within ten minutes. The Fabricator may request an extension of time on the catalyzed resin, contingent upon providing sufficient test data to demonstrate an extended gel time for the specific composition of the catalyzed resin with a specified quantity of gel time inhibitor. No additional time extensions will be permitted after this.

The infusion tank shall be charged with a sufficient amount of resin at all times to prevent air bubbles from entering the infusion port(s) in the form. Once the resin is introduced in to the form, the infusion process shall continue uninterrupted until it has been demonstrated that all evacuation ports have a surplus of resin flowing past the finished surface of the pontoon and that no less than the predicted volume of resin has been introduced in to the form.

- (h) Curing. Allow the resin to cure properly prior to removal of vacuum pressure and forms. In the absence of specific product information, the forms shall remain in-place under full vacuum pressure for a minimum of 6 continuous hours after all evacuation lines have been clamped and the infusion process is considered to have been completed.
- (i) Witness Panels. Witness panels of thicknesses that represent the material properties of each distinct laminate, or of a proportional thickness, shall be fabricated with each pontoon to demonstrate consistency of material properties. Witness panels shall be rectangular and shall have minimum edge lengths of 2 feet. Witness panels shall be tested by the Fabricator at the same testing facility used for initial lab testing required under SUBMITTALS of this Section.

The Agency representative shall randomly select witness panel sets created during the fabrication of three different pontoons to be tested by the Fabricator in accordance with Table III, prior to shipment of the pontoons. Selection of the witness panels to be tested will occur within one working day of cure completion. The Agency representative shall observe all witness panel testing, if practical. In the event the Agency representative is unable to observe the witness panel testing, the Agency will perform third party acceptance testing. Pontoons may be shipped prior to knowing the results of Agency acceptance tests. If acceptance tests results do not meet project requirements, the pontoons may be subject to rejection or repair.

Strengths and stiffnesses required by the Fabrication Engineer's design in excess of those noted in Table III shall become the minimum benchmark for proof tests. A minimum of 5 coupon tests per panel per test type are required.

The remaining witness panels shall be stored for the duration of project construction and tested by the Fabricator in the event additional testing is warranted. Any unused witness panels shall be delivered to the VTrans Materials and Research Section in Berlin, VT.

Table III - Witness Panel Testing Requirements		
Physical/Mechanical property	Requirements	ASTM Test Method
Water Absorption	< 0.7%	D570
Density	Within $\pm 5\%$ of theoretical design value	D792
Fiber Volume Fraction	> 45% by volume	D2584
Flexural Strength	Longitudinal	> 35 ksi
	Transverse	> 20 ksi
Flexural Stiffness	Longitudinal	> 1,800 ksi
	Transverse	> 1,400 ksi
Pin Bearing Strength ¹	> 20 ksi	D953

¹Pin bearing strength tests shall be conducted with the bolt sizes and types identified in the Plans and the FRP plates intended for use in the fabrication of the pontoons. The 4% deformation criteria noted in ASTM D953 shall be ignored and the tests shall be carried through and reported at ultimate failure.

(j) Dimensional Tolerances (at 40°F).

(1) Geometry of FRP Pontoon. Dimensional tolerances not specifically identified herein shall be in accordance with ASTM D3917.

- a. Length (Each Unit): $\pm 1/2"$
- b. Adjacent unit lengths shall not differ by more than $1/2"$.
- c. Depth and Width: $\pm 1/4"$
- d. Wall Thickness: $+ 1/16"$; $-0"$
- e. Surface Flatness: $\pm 1/16"$ per 48"
- f. Sweep: $\pm 1/8"$
- g. Camber: $+ 1/2"$; $-1/4"$
- h. Deviation from Diagonals: $\pm 3/4"$
- i. Deviation from End Squareness: $\pm 1/4"$
- j. Insert or Hole Locations: $\pm 1/8"$

(1) Field Installation.

- a. Vertical differential between pontoon surfaces creating a single raft: not to exceed $1/8"$.
- b. Floating span overall length: $\pm 1/2"$

(k) Repairs. Units that contain minor defects as identified by ASTM D 2563, Acceptance Level II caused by manufacturing or handling may be repaired at the manufacturing site provided the defect and subsequent repair do not diminish the strength or serviceability of the final product, as determined by the Engineer. Repair procedures shall be in accordance with the Fabrication Facility's approved QCQA Plan and require approval by the Engineer.

Presence of defects exceeding the severity limitations of ASTM D2563, Table 1, Acceptance Level II may be grounds for rejection of the unit. Presence of more than 2 defects within a 1 foot radius measured from the center of any given defect may be grounds for rejection of the unit.

Repairs proposed by the Fabricator shall include physical testing or historic evidence of satisfactory performance to validate the intended repair. Repair procedures, if approved, shall be noted on the Working Drawings.

- (l) Surface Preparation. Clean surfaces of all contaminants, including mold release agent. All ridges or fins (flash) of resin shall be removed by scraping, grinding, or sanding as required.
- (m) Pre-Assembly. Adjacent pontoons and consecutive rafts shall be pre-assembled on land to assure proper fit up prior to launching in Sunset Lake, to the satisfaction of the Agency.

Steel field splice plates shall be used as templates in locating and drilling bolt holes to ensure proper fit-up. Transverse threaded rods need not be tensioned during the pre-assembly.

74. MARKING, STORING, AND SHIPPING.

- (a) Labeling. Each unit shall be clearly labeled on the upstation end wall of each pontoon with the following information:
 - (1) Fabricator
 - (2) Date of Manufacture
 - (3) Mark Number
- (b) Fabrication Site Handling. Units shall not be lifted, moved, or otherwise disturbed until the resin has fully cured in accordance with these provisions and the Fabricator's designs and methods.
- (c) Storing. Store pontoons flat, off of ground, and protected from UV light. At a minimum, units shall be supported at each transverse diaphragm and at a maximum of 4 foot spaces between diaphragms. Stacking of pontoons is acceptable.

Threaded rods shall be covered and protected from the elements and debris. Any damage to the threaded rods shall be repaired in accordance with Subsection 726.08.

- (d) Shipping. Provide proposed shipping plan, including supports, UV protection during transportation, and stacking sequence of units, if any, to the Agency for approval.

Any damage or suspected damage that occurs during storage or shipping shall be reported, investigated by means of nondestructive testing or other methods, and repaired by the Fabricator.

75. ASSEMBLY. Any damage or suspected damage, as observed by the Engineer, that occurs during assembly shall be reported, investigated by means of nondestructive testing or other methods, and repaired by the Fabricator or Contractor.

Revised February 11, 2014

- (a) General. pontoons shall be assembled in individual rafts on land, prior to launching in the Lake. The interface between adjacent pontoons shall be cleaned of debris, grease, and other laitance prior to assembly.
- (b) Transverse Threaded Rods. Transverse threaded rods shall be tensioned to the magnitude noted in the Plans prior to launching the rafts in the Lake. Tensioning shall be performed using a calibrated torque wrench and corresponding torque tensioning chart. Protective end caps shall be installed at transverse rod anchor locations prior to launching the rafts in the Lake.
- (c) Connections and Bolting. Bolts used in the field splice connection shall be tightened in accordance with the Plans. Bolts used to connect the timber deck panels to the FRP pontoons shall be tightened in accordance with the Plans. All bolts shall be fastened with two washers and a double nut.
76. INSPECTION. Materials furnished and the work performed under these provisions shall be inspected by an Agency representative. The Agency representative will have the authority to reject any material or work that does not meet the requirements of these provisions. Advance notification of at least twenty-one (21) days shall be provided by the Fabricator to the Agency's Engineer indicating the fabrication start date.
- Prior to shipment of any pontoons, the Agency's Engineer must have approved all applicable material certifications required in accordance with Subsection 700.02 and results of test requirements in accordance with these provisions.
77. METHOD OF MEASUREMENT. The quantity of Special Provision (Fiber Reinforced Polymer pontoons) to be measured for payment will be on a lump sum basis in the complete and accepted work.
78. BASIS OF PAYMENT. The accepted quantity of Special Provision (Fiber Reinforced Polymer pontoons) will be paid for at the Contract lump sum price. Payment will be full compensation for designing, detailing, testing, fabricating, repairing, transporting, storing, handling, and placing the materials specified, including transverse rods and hardware and protective caps, steel field splice plates and hardware, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work. Hardware and labor necessary for drilling and installing hardware used to attach the nail laminated timber deck panels shall be paid separately.

When Working Design Calculations, Test Sample Documentation, Working Drawings, and Quality Control documents have been submitted and approved in accordance with Section 105 and these provisions, a payment of 10 percent of the lump sum price will be allowed. When the fiber reinforced polymer pontoons have been fabricated and approved for shipment, a further payment of 75 percent of the lump sum price will be allowed. An additional 10 percent of the lump sum price will be paid when the Fiber Reinforced Polymer pontoons are accepted in place and remaining project efforts are approved to commence. The remaining 5 percent of the lump sum price will be paid after Substantial Completion of the project has been issued.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (Fiber Reinforced Polymer Pontoons)	Lump Sum

BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY

79. DESCRIPTION. This work shall consist of constructing one or more courses of bituminous mixture on a prepared foundation in accordance with these specifications and the specific requirements of the type of surface being placed, and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the Plans or established by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and the appropriate provisions of Section 406 or Section 490 of the Standard Specifications.

80. MATERIALS. Materials shall meet the requirements of the following Subsections:

- Performance-Graded Asphalt Binder.....702.02
- Emulsified Asphalt, RS-1H or CRS-1H.....702.04
- Aggregate for Marshall Bituminous Concrete Pavement...704.10(a)
- Aggregate for Superpave Bituminous Concrete Pavement..704.10(b)

Aggregate shall meet requirements relating to Section 406 or 490, where so specified.

The grade of PG asphalt binder used to produce bituminous concrete pavement shall be 58-28. Substitutions will be accepted based on availability where the upper end temperature value is greater than 58°C (136°F) and/or the lower end temperature value is less than -28°C (-18°F).

81. DESIGN MIX TYPES. Design mix types may be substituted based on mix availability. Allowable mix type substitutions will be accepted on a one to one thickness relationship, except as listed in Tables A and B below.

TABLE A - ALLOWABLE 40 MM (1½") MIX TYPE IVS SUBSTITUTIONS

Design ESALS (millions)	Design	Allowable Substitution	
	490.30 Superpave Bituminous Concrete Pavement	406.25 Bituminous Concrete Pavement*	406.27 Med. Duty Bituminous Concrete Pavement*
< 0.3	TYPE IVS	TYPE III	TYPE III
0.3 to < 10	TYPE IVS	TYPE III	-

*Per Section 406.

TABLE B - ALLOWABLE 90 MM (3 1/2") MIX TYPE IIS SUBSTITUTIONS

Design ESALs (millions)	Design	Allowable Substitution	
		490.30 Superpave Bituminous Concrete Pavement	406.25 Bituminous Concrete Pavement*
< 0.3	TYPE IIS	TYPE I	TYPE I
0.3 to < 10	TYPE IIS	TYPE I	-

*Per Section 406

82. COMPOSITION OF MIXTURE.

- (a) Gradation. Gradation shall meet the requirements of Section 406 or 490, as appropriate.
- (b) Design Criteria. Design Criteria shall meet the requirements of Section 406 or 490, as appropriate.
- (c) Mix Design. Standard mix design will be in accordance with Subsection 490.03 with an n value of 65 gyrations. Allowable substitutions based on pre-existing approved mix designs and/or n values for intended Contract suppliers are listed in Table C below. A request for substitutions must be submitted in writing to the Engineer a minimum of 10 working days prior to production. Any substitutions from the standard mix design or mix types as detailed in the Plans shall not result in any increase in cost to the Agency.

TABLE C - ALLOWABLE SPECIFICATION SUBSTITUTIONS

Design ESALs (millions)	Acceptable Specification Substitution		
	Superpave Bituminous Concrete Pavement (Gyrations)	Bituminous Concrete Pavement* (75 Blow)	Med. Duty Bituminous Concrete Pavement* (50 Blow)
< 0.3	50	✓	✓
0.3 to < 10	65 ¹	✓	-

¹Standard mix design specification.

*Per Section 406

(d) Quality Acceptance.

- (1) General. Acceptance sampling and testing will be conducted in accordance with the Agency's Quality Assurance Program as approved by FHWA. Bituminous concrete mixtures designated under these specifications will be sampled a minimum of once per day of production or 500 metric tons (sublot), or other sublot size deemed appropriate, and evaluated by the Agency for each mix type (each mix design) in accordance with the following acceptance guidelines.

- (2) Acceptance Guidelines. Temperature of the bituminous mixture shall be tested using the Verified Thermometer test method and PG Asphalt Binder content determined from the batch slip. Gradation shall be tested in accordance with AASHTO T 30. Mixture volumetric properties (air voids and VMA) shall be calculated in accordance with Subsections 406.03(b) or 490.03(b), as appropriate.
 - (3) Non-Compliant Material.
 - a. Rejection by Contractor. The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material at no expense to the Agency. Any such new material will be sampled, tested, and evaluated for acceptance.
 - b. For any non-compliant material outside the production testing tolerances contained in the applicable Table 406.03C or 490.03C, the representative material (sublot) shall be assessed a mixture pay adjustment factor, PF(mix), of (-0.200).
 - (e) Boxed Samples. If Agency plant inspectors are not available for daily testing and inspection functions, then box samples will be taken by the Engineer at the project site to afford verification of mixture volumetrics/properties. Boxed samples will be processed and results reported to the Engineer within ten working days of being received at the Agency Central Laboratory in Berlin, Vermont. Gradation shall be tested in accordance with AASHTO T 30. Maximum Specific Gravity shall be tested in accordance with AASHTO T 209. Boxed samples will be assessed a mixture pay adjustment factor of 0.000.
83. COMPACTION. Special Provision (Bituminous Concrete Pavement, Small Quantity) will be analyzed for density according to the procedure specified below.

The density of the compacted pavement shall be at least 92.0%, but not more than 97.0%, of the corresponding daily average maximum specific gravity for each mix type (each mix design) of bituminous mix placed during each day, or placed per bridge for any bridge project. For material that falls outside of this range, payment will be made by adjusting the daily production totals in accordance with Table D:

TABLE D - DENSITY PAY FACTORS

AVERAGE DENSITY	DENSITY PAY FACTOR, PF(d)
89.0% - 90.4%	- 0.150
90.5% - 91.9%	- 0.100
92.0% - 93.4%	0.000
93.5% - 95.4%	0.150
95.5% - 97.0%	0.000
97.1% - 98.5%	- 0.100

When the Contract allows for a pay adjustment for mat density and the Agency elects to not take cores of any pavement course, the Density Pay Factor (PF(d)) will be considered equal to 0.000.

Bridges with a length equal to, or greater than, six meters (20 feet) will be cored for analyzing density of the bridge deck pavement. The minimum number of cores (taken from the center of the travel lane) shall be two, or as directed by the Engineer. Bridges with a length less than six meters (20 feet) will not be cored. Bridge decks or approaches will not be cored within three meters (10 feet) of a bridge or construction joint.

Bridge deck core areas shall be repaired with hot bituminous mix to the satisfaction of the Engineer at no additional cost to the Agency.

The cores taken for acceptance testing will be the final cores taken for determination of densities.

When the Contract does not allow for a pay adjustment for mat density the Contractor shall, prior to performing any construction operations, submit to the Engineer for approval the proposed rolling pattern and compaction equipment to be used on the project. Random investigative cores will be taken by Agency personnel on the first day's production of any pavement course, with the exception of the leveling course, to verify effectiveness of the proposed rolling pattern and equipment.

Pending results of the investigative cores, necessary adjustments to the proposed rolling pattern and/or equipment shall be made by the Contractor to achieve densities as directed by the Engineer.

84. METHOD OF MEASUREMENT. The quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) to be measured for payment will be the number of metric tons (tons) for a lot of mixture (each type) complete in place in the accepted work (Q) as determined from the weigh tickets.

The quantities of all applicable Pay Adjustments calculated for the project will be determined as specified below.

When applicable, and when the mixture pay factor, PF(mix), for a lot of Special Provision (Bituminous Concrete Pavement, Small Quantity) is less than 0.000, the measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) placed will be multiplied by such pay factor to determine a Mixture Pay Adjustment, (PA(mix)), to the accepted tonnage placed (Q) for that lot based on the Contract bid price (B), as follows:

$$PA(mix) = PF(mix) \times Q \times B$$

When applicable, and when the density pay factor, PF(d), for a lot of Special Provision (Bituminous Concrete Pavement, Small Quantity) is less than 0.000, the measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) placed that day, or placed per bridge for any bridge project, will be multiplied by such pay factor to determine a Mat Density Pay Adjustment, (PA(d)), to the accepted tonnage placed (Q) for that lot based on the Contract bid price (B), as follows:

$$PA(d) = PF(d) \times Q \times B$$

85. BASIS OF PAYMENT. The measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) will be paid for at the Contract unit price per metric ton (ton). Payment shall be full compensation for furnishing, mixing, hauling, and placing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment for Pay Adjustments shall be debited against the Contract prices (Lump Units) bid for the Pay Adjustment items.

The cost of repairing bridge deck core areas will not be paid for separately, but will be considered incidental to Special Provision (Bituminous Concrete Pavement, Small Quantity).

The costs of furnishing testing facilities and supplies at the plant will be considered included in the Contract unit price of Special Provision (Bituminous Concrete Pavement, Small Quantity).

The costs of obtaining, furnishing, transporting, and providing the straightedges required by Subsection 406.16 or Subsection 490.16, as appropriate, will be paid for under the appropriate Section 631 pay item included in the Contract.

The costs associated with obtaining samples for acceptance testing will be incidental to the cost of Special Provision (Bituminous Concrete Pavement, Small Quantity).

When not specified as items in the Contract, the costs of cleaning and filling joints and cracks, sweeping and cleaning existing paved surfaces, the emulsified asphalt applied to tack these surfaces, and tacking of manholes, curbing, gutters, and other contact surfaces will not be paid for directly, but will be incidental to Special Provision (Bituminous Concrete Pavement, Small Quantity).

Special Provision (Bituminous Concrete Pavement, Small Quantity) mixture approved by the Engineer for use in correcting deficiencies in the base course constructed as part of the Contract will not be paid for as Special Provision (Bituminous Concrete Pavement, Small Quantity), but will be incidental to the Contract item for the specified type of base course.

Special Provision (Bituminous Concrete Pavement, Small Quantity) mixture used to correct deficiencies in an existing pavement or to adjust the grade of a bituminous concrete surface completed under the Contract will be paid for at the Contract unit price for Special Provision (Bituminous Concrete Pavement, Small Quantity).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Mat Density Pay Adjustment, Small Quantity) (N.A.B.I.)	Lump Unit
900.650 Special Provision (Mixture Pay Adjustment) (N.A.B.I.)	Lump Unit
900.680 Special Provision (Bituminous Concrete Pavement, Small Quantity)	Ton

NAIL LAMINATED TIMBER DECK PANEL

86. DESCRIPTION. This work shall consist of detailing, furnishing, fabricating, treating, assembling, transporting, and installing nail laminated timber deck panels at the locations indicated in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 522 of the Standard Specifications.

87. MATERIALS.

- (a) Elastomeric Pad. Elastomeric material shall meet the requirements of Subsection 731.03.
- (b) Drift Pins. Drift pins shall conform to the requirements of ASTM F 568M, Class 4.6 (ASTM A 307).
- (c) Nails. Nails shall be threaded hardened-steel nails (helical or annular threaded nails) with a minimum length of 4" and a minimum root diameter of 0.19". Nails shall be hot dipped galvanized in accordance with Subsection 726.08.

All other materials shall meet the requirements specified in the Plans and Subsection 522.02.

88. SUBMITTALS. The Contractor shall prepare and submit Fabrication Drawings in accordance with Section 105. The Fabrication Drawings shall fully detail member lengths, cuts, and hole sizes and locations, as well as indicate fabrication practices.

The Contractor shall submit an erection plan in accordance with Section 105 of the Standard Specifications. The erection plan shall include methods and sequence of erection, the equipment to be used for the erection, the necessary computations to indicate the magnitude of stress in the panels during erection, and to demonstrate that all of the erection equipment has adequate capacity for the work to be performed. The Contractor shall follow the erection plan as submitted.

89. GENERAL FABRICATION REQUIREMENTS.

- (a) General. Drive nails with just sufficient force to set the heads flush with the wood surface. Deep or frequent hammer marks in exposed wood surfaces shall be considered evidence of poor work quality and may be cause for rejection of the panel. The use of pneumatic nailers will not be allowed.

Timber shall be accurately cut and framed, true and exact to a close fit, in such a manner that the panels will have even bearing over the entire contact surfaces. Keep each strip vertical and tight against the preceding one with even bearing on all supports.

- (b) Timber. Ensure all timber used in the fabrication of panels is straight, sawed square at the ends, and has opposite sides parallel. Timber shall be graded after cutting to the required length.

Revised February 11, 2014

Cut individual timber members for use in panels to proper length and drill all lead holes, bolt holes, spike holes, and lag screw holes for hardware prior to treatment. Individual laminates (timber members) shall be treated prior to assembling the deck panels.

No more than one butt joint will be allowed within a transverse laminate. Board lengths shall be determined to limit butt joint locations to the middle 1/3 of supports. Butt joints at a given support location shall be limited to one joint per three sequential laminates.

- (c) Panel Width. At the Contractor's discretion, the panel widths (as measured in the direction of traffic) may be altered from those depicted on the Plans. Unless otherwise shown on the Plans, the minimum panel length shall be 4.25 feet. The Contractor shall be responsible for determining and coordinating, and for incurring all costs related to, all details associated with the changed geometry.
- (d) Ship Lap Joint. At the Contractor's discretion, the width of the timber boards used in the ship-lap joint detail depicted on the Plans may be increased from the 1.5 inch value shown. Nails used to attach the partial depth timber laminate to the remainder of the nail laminated timber deck shall be of sufficient length to pass through the partial depth timber laminate used in the ship-lap joint as well as 1.5 additional laminates in the remainder of the nail laminated deck panel. All costs associated with such changes shall be at the Contractor's expense.
- (e) Dimensional Tolerances.
- (1) Length (Each panel, longitudinal with bridge): $\pm 1/8"$
 - (2) Width (Each panel, transverse to bridge): $\pm 1/4"$
 - (3) Thickness: $\pm 1/16"$
 - (4) Surface Variation (adjacent boards): $\pm 1/16"$
 - (5) Deviation from Diagonals: $\pm 1/4"$
 - (6) Camber: $\pm 3/4"$

90. MARKING, HANDLING, AND INSTALLATION.

- (a) Marking. Each unit shall be clearly labeled on the bottom of each panel. Panels shall be installed with the concave side on top.
- (b) Handling. If lifting devices are proposed for use, holes for attachment of the lifting devices shall be approved by the Engineer and shall be fabricated prior to treatment. Any holes not used in the final condition shall be located such that they are not visible (e.g.: beneath the sidewalk or runner boards) and shall be filled with tar emulsion after completion of the installation.

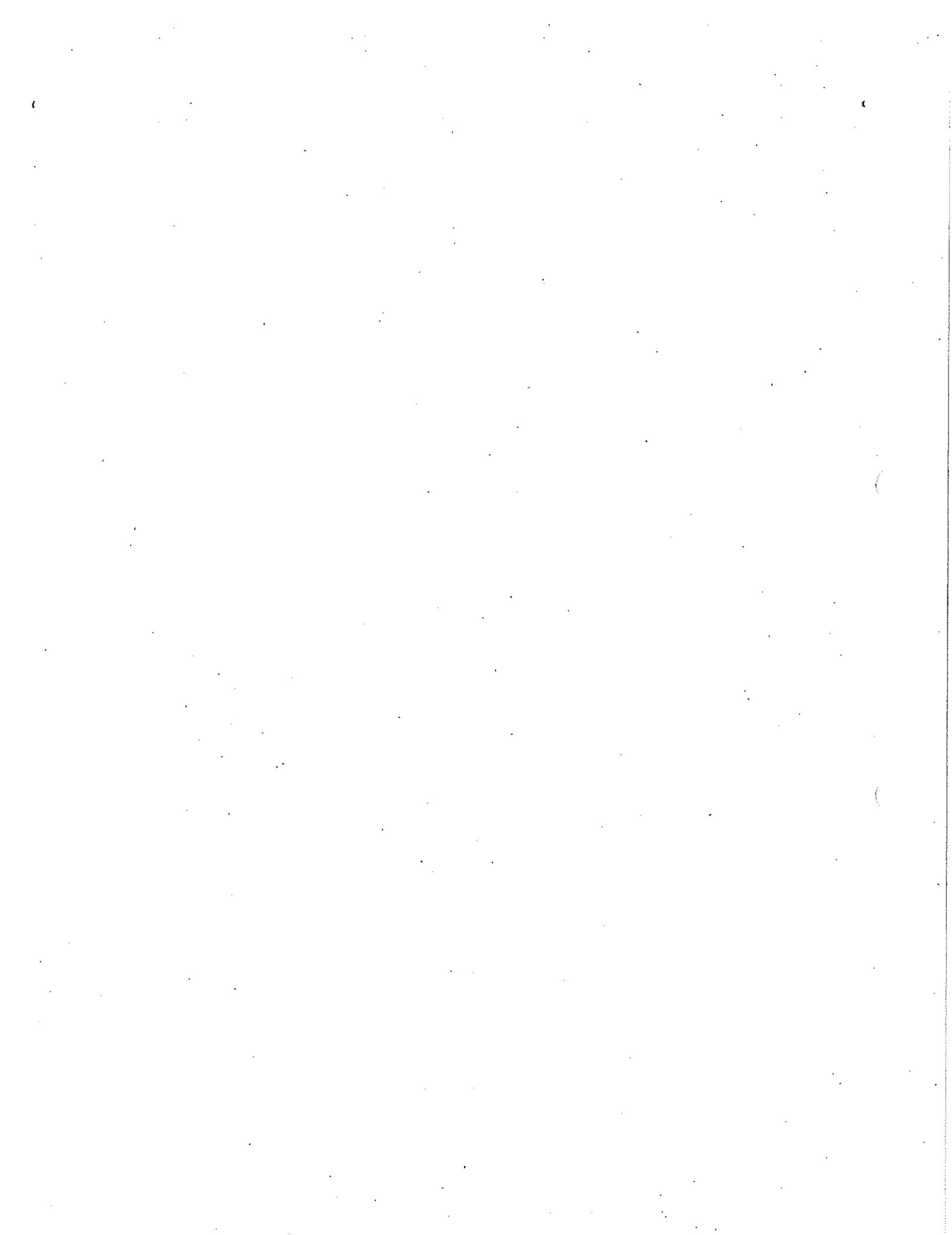
- 91. METHOD OF MEASUREMENT. The quantity of Special Provision (Nail Laminated Deck Panel) of the depth specified to be measured for payment will be the number of square meters (square feet) incorporated into the complete and accepted work.
- 92. BASIS OF PAYMENT. The accepted quantity of Special Provision (Nail Laminated Deck Panel) of the depth specified will be paid for at the Contract unit price per square meter (square foot). Payment will be full compensation for detailing, fabricating, treating, furnishing, transporting, handling, assembling, and installing the material specified, including elastomeric pads, timber sleepers, and hardware; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.670 Special Provision (Nail Laminated Timber Deck Panel)	Square Foot

ADDITIONAL SPECIAL PROVISION

- 93. NOTICE TO BIDDERS - BUY AMERICA REQUIREMENT FOR NAILS. The Contractor is hereby notified that the Buy America requirements as specified in the Contract Documents apply to the nails incorporated into this project; the Contractor's attention is directed to the requirements of Subsections 107.22 and 700.02.
- 94. NOTICE TO BIDDERS - REFERENCE PLANS AND PHOTOGRAPHS. The Contractor is hereby notified that Reference Plans and photographs for the existing structure are being made available to prospective bidders for informational purposes only. This information will be made available concurrent with the issuance of Addendum #1 for this project and will be available for viewing/download for the remainder of the solicitation period only.



Minimum Labor and Truck Rates
Under Title 19, Vermont Statutes
Annotated Section 18, as amended

April 3, 1997
Sheet 1 of 1

**STATE OF VERMONT
AGENCY OF TRANSPORTATION
MONTPELIER**

FOR OTHER THAN FEDERAL-AID. In accordance with the provisions of Title 19, VSA, Section 18, the following minimum rate for labor shall apply to this project:

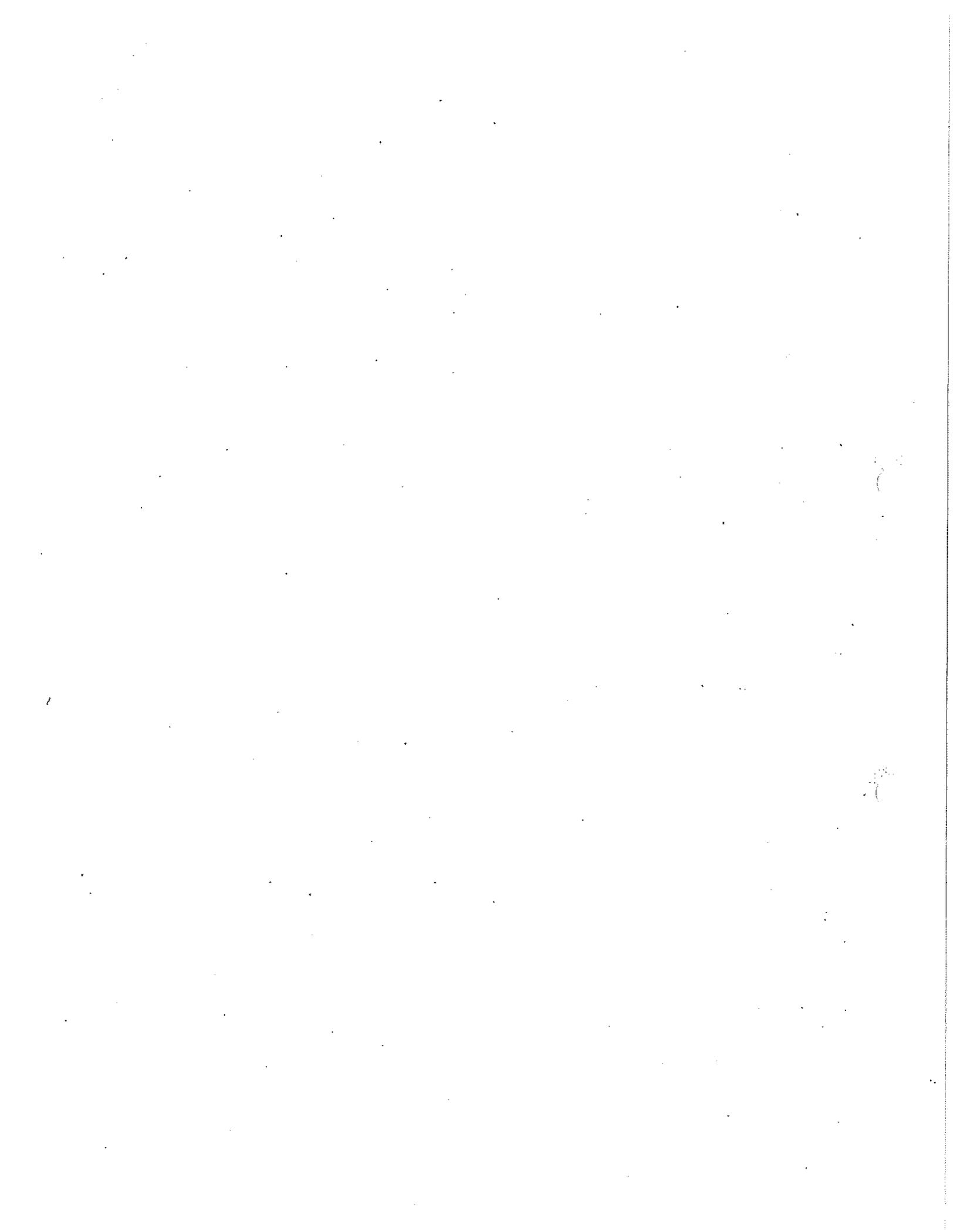
The minimum wage for common labor will not be less than the State or Federal minimum wage, whichever is higher.

ON FEDERAL-AID PROJECTS ONLY.

The minimum rates for labor for Federal-Aid Projects shall be those set in the Wage Determination Decision of the U.S. Secretary of Labor for each project in accordance with the Federal-Aid Highway Act of 1956. When such wage rates are required they shall be included in the proposal. In the event these rates are lower than the Vermont rates, the Vermont rates shall prevail.

TRUCK RATES. In accordance with the provisions of Title 19, VSA, Section 18, the following minimum rates for trucks shall apply to this project:

<u>Trucks, not Including Driver Water Level Body Capacity</u>	<u>Minimum Rates Per YD per Hr.</u>
Trucks, Equipment Loaded	\$1.65



State of Vermont
Agency of Transportation

March 2011
CA-110

DISADVANTAGED BUSINESS ENTERPRISE (DBE) POLICY CONTRACT REQUIREMENTS

Disadvantaged Business Enterprise (DBE) Policy. It shall be the policy of the Vermont Agency of Transportation (VTrans) to ensure nondiscriminatory opportunity for Disadvantaged Business Enterprises (DBEs) to participate in the performance of all contracts and subcontracts financed with Federal funds as specified by the regulations of the United States Department of Transportation (USDOT), Federal Highway Administration and as set forth below.

1. **Policy.** It is the policy of USDOT that DBEs as defined in 49 Code of Federal Regulation (CFR) Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 and 23 CFR, Chapter 1, Part 230, Subpart b apply to this contract.
2. **DBE Obligation.** The State and its Contractors agree to ensure that DBEs as defined in 49 CFR Part 26, have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. Each subcontract the prime contractor signs with a subcontractor must include this assurance: *The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as VTrans deems appropriate.*
3. **Sanctions for Noncompliance.** The Contractor is hereby advised that failure of the Contractor, or any Subcontractor performing work under this contract, to carry out the requirements set forth in paragraphs 1 and 2 above shall constitute a breach of contract and after the notification of the Vermont Agency of Transportation, Secretary of Transportation, may result in termination of this contract by the State or such remedy as the State deems necessary.
4. **Inclusion in Subcontracts.** The Contractor shall insert in each of its subcontracts this Disadvantaged Business Enterprise (DBE) Policy and also a clause requiring its subcontractors to include this same Policy in any lower tier subcontracts which they may enter into, together with a clause requiring the inclusion of the Policy in any further subcontract that may in turn be made. This Policy shall not be incorporated by reference.

Disadvantaged Business Enterprise (DBE) Program Goals. The Vermont Agency of Transportation (VTrans) is required to set an overall DBE goal for participation in all transportation related Federal-aid projects. The goal is determined following guidelines set forth in 49 CFR 26.45, and based on the availability of ready, willing and able DBEs who submitted bids and quotes for transportation related projects, compared as a percentage of all available contractors who submitted bids and quotes for transportation related projects during the same time period. The DBE goal may be adjusted to take into account other factors impacting DBE utilization, in an effort to narrowly tailor the overall DBE goal. The detailed goal setting methodology and current overall DBE goal may be viewed on the VTrans website at: <http://www.aot.state.vt.us/CivilRights/DBEGoals.htm> .

VTrans currently utilizes a race/gender neutral policy to fulfill its overall DBE goals, and relies on the voluntary participation of contractors to utilize certified DBEs on every project sufficient to obtain the Agency's overall DBE goal. In order for this practice to continue, contractors must be proactive and solicit bids and quotes from certified DBEs for use when submitting their own bids, and employ certified DBEs when participating on transportation related projects. Otherwise, VTrans may have to implement specified contract goals on projects to ensure the overall DBE goals are met. VTrans may include specific DBE contract goals in certain cases to ensure DBE participation, if failure to obtain the project DBE goal would negatively impact the Agency's overall DBE goal because of the size of the contract.

Disadvantaged Business Enterprise (DBE) Definition. A DBE is defined as a business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purposes of this definition:

- (1) "Socially and economically disadvantaged person" means an individual who is a citizen or lawful permanent resident of the United States and who is a Woman, Black, Hispanic, Portuguese, Native American, Asian American, or a member of another group, or an individual found to be disadvantaged by the Small Business Administration pursuant to Section 3 of the Small Business Act.
- (2) "Owned and controlled" means a business which is:
 - a. A sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.
 - b. A partnership, joint venture or limited liability company in which at least 51% of the beneficial ownership interests legitimately is held by a disadvantaged person(s).
 - c. A corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with percentage of ownership. Disadvantaged participation in a joint venture must also be based on the sharing of real earnings, as above. If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of the program, a firm is considered a bona fide DBE.

Certified DBE Directory. The current Vermont Unified Disadvantaged Business Enterprise (DBE) Directory is available online at: <http://www.aot.state.vt.us/CivilRights/DBEDirectory.htm>. This directory contains all currently certified DBEs available for work in Vermont, and is updated continuously. Only firms listed in this directory are eligible for DBE credit on Vermont Federal-aid projects. If you have questions about DBE certification, or do not have access to the Internet, please call the DBE Program Manager at (802) 828-5858 for assistance.

Counting DBE Participation Towards Project Goals. In order for payments made to DBE contractors to be counted toward DBE goals, the DBE contractors must perform a commercially useful function (CUF). The DBE must be responsible for execution of the work of the contract and must carry out its responsibilities by actually performing, managing, and supervising the work involved, consistent with standard industry practices.

This means that:

- The DBE must also be responsible for ordering its own materials and supplies, determining quantity and quality, negotiating price, installing (where applicable) and paying for the material itself;
- The DBE must perform work commensurate with the amount of its contract;
- The DBE's contribution cannot be that of an extra participant or a conduit through which funds are passed in order to obtain the appearance of DBE participation;
- The DBE must exercise responsibility for at least fifty percent of the total cost of its contract with its own workforce;
- None of the DBE's work can be subcontracted back to the prime contractor, nor can the DBE employ the prime's or other subcontractor's supervisors currently working on the project;
- The DBE's labor force must be separate and apart from that of the prime contractor or other subcontractors on the project. Transferring crews between primes, subcontractors, and DBE contractors is not acceptable;
- The DBE owner must hold necessary professional or craft license(s) or certification(s) for the type of work he/she performs on the project;
- The DBE may rent or lease, at competitive rates, equipment needed on the project from customary leasing sources or from other subcontractors on the project.

Allowable credit for payments made to DBEs for work performed. A contractor may take credit for payments made to a certified DBE that satisfies CUF requirements at the following rate:

- A DBE Prime Contractor: Count 100% of the value of the work performed by own forces, equipment and materials towards the DBE goals.
- An approved DBE subcontractor: Count 100% of the value of work performed by the DBE's own forces, equipment and materials, excluding the following:
 - The cost of materials/supplies purchased from a non-DBE Prime Contractor.
 - The value of work provided by non-DBE lower tier subcontractors, including non-DBE trucking to deliver asphalt to a DBE contractor.
- A DBE owner-operator of construction equipment: Count 100% of expenditures committed.
- A DBE manufacturer: Count 100% of expenditures committed. The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.
- A regular DBE dealer/supplier: Count 60% of expenditures committed. A regular dealer/supplier is defined as a firm that owns, operates, or maintains a store, warehouse or other establishment, in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. A person may be a dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business, if the person both owns and operates distribution equipment for the products, by the means of a long term agreement, and not by a contract by contract basis.
- A DBE broker: Count for DBE credit only the fees or commissions charged for assistance in the procurement, and, fees and transportation charges for the delivery of materials or supplies required at the job site, but not the cost of materials procured. A broker is defined as any person(s) or firm who arranges or expedites transactions for materials or supplies, and does not take physical possession of the materials or supplies at their place of business for resale.
- A DBE renter of construction equipment to a contractor: Count 20% of expenditures committed, with or without operator.

- A bona fide DBE service provider: Count 100% of reasonable fees or commissions. Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract. Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.
- A trucking, hauling or delivery operation: Count 100% of expenditures committed when trucks are owned, operated, licensed and insured by the DBE and used on the contract and, if applicable, includes the cost of the materials and supplies. 100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator. 100% of reasonable fees, or commissions, the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.
- Any combination of the above.

Removal of Approved DBE From Transportation Related Project. Contractors may not terminate for convenience, any approved DBE subcontractor and perform the work with their own forces, without prior written consent from the VTrans DBE Program Manager or VTrans Chief of Civil Rights.

Federal-aid projects which specify a DBE contract goal. The provisions of the Vermont Agency of Transportation Supplemental Specification – Disadvantaged Business Enterprise (DBE) Utilization (CA 160) shall apply to all VTrans Federal-aid projects which specify a DBE contract goal.

Compliance With Prompt Payment Statute. In accordance with Vermont's Prompt Payment Act and VTrans Standard Specifications for Construction, Section 107.01(g), the Contractor shall fully comply with the provisions of 9 V.S.A. Chapter 102, also referred to as Act No. 74 of 1991 or the Prompt Payment Act, as amended.

Subcontractor Payments. In accordance with VTrans Standard Specifications for Construction, Section 107.01(h), on all federal-aid and state funded contracts, the Contractor, during the life of the Contract and on a monthly basis, shall submit electronically, a listing of payments to subcontractors on the form specified by the State and made available at: <http://apps.vtrans.vermont.gov/db/>. Electronic reports shall be filed with the Agency Office of Civil Rights by an authorized representative and received in the Agency Office of Civil Rights on or before the tenth working day after month end. Contractors without access to the internet shall obtain and submit manual reports to the Agency Office of Civil Rights. Manual reports shall be signed by an authorized representative, sent to the Agency Office of Civil Rights, and postmarked on or before the tenth working day after month end. There shall be no direct compensation allowed the Contractor for this work, but the cost thereof shall be included in the general cost of the work. In accordance with 9 V.S.A. Section 4003, notwithstanding any contrary agreement, payments made to subcontractors after seven days from receipt of a corresponding progress payment by the State to the Contractor, or seven days after receipt of a subcontractor's invoice, whichever is later, violate this agreement. Violations shall be reported to the Agency Office of Civil Rights for review. Failure to resolve disputes in a timely manner may result in a complaint made to the Agency Pre-qualification Committee. In this Committee's judgment, appropriate penalties may be involved for failure to comply with this specification. Penalties may include suspension, reduction or revocation of the Contractor's pre-qualification rating. This clause shall be included in the prime Contractor's Contract made with all of its subcontractors.

General Decision Number: VT140039 01/03/2014 VT39

Superseded General Decision Number: VT20130039

State: Vermont

Construction Type: Highway

County: Orange County in Vermont.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels; building structures in rest areas; railroad construction; bascule, suspension & spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; and other major bridges)

Modification Number Publication Date
 0 01/03/2014

* SUVT2011-024 09/14/2011

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 17.11	1.79
CEMENT MASON/CONCRETE FINISHER...	\$ 25.34	0.00
ELECTRICIAN, Includes Installation of Traffic Signals.....	\$ 23.32	0.00
GUARDRAIL INSTALLER.....	\$ 12.85	0.00
IRONWORKER, REINFORCING.....	\$ 16.03	2.39
IRONWORKER, STRUCTURAL.....	\$ 21.15	15.54
LABORER: Common or General Includes Asphalt Raker and Concrete Work.....	\$ 13.91	2.77
LABORER: Flagger.....	\$ 10.04	3.54
LABORER: Landscape.....	\$ 12.31	1.03
LABORER: Screedman.....	\$ 16.30	4.23
LABORER: Sign Erector/Installer.....	\$ 14.31	4.70
OPERATOR: Asphalt Roller.....	\$ 18.14	4.44
OPERATOR: Backhoe.....	\$ 18.99	1.64
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 16.20	0.00
OPERATOR: Broom.....	\$ 16.88	3.72

OPERATOR: Bulldozer.....	\$ 19.18	2.56
OPERATOR: Cold Planer/Milling Machine.....	\$ 15.56	0.00
OPERATOR: Crane.....	\$ 20.00	2.13
OPERATOR: Excavator.....	\$ 18.10	1.36
OPERATOR: Grader/Blade.....	\$ 18.44	3.50
OPERATOR: Loader.....	\$ 16.85	3.07
OPERATOR: Mechanic.....	\$ 20.45	0.00
OPERATOR: Paver.....	\$ 15.91	3.20
OPERATOR: Pounder.....	\$ 18.11	0.00
OPERATOR: Roller excluding Asphalt.....	\$ 16.81	3.35
OPERATOR: Screed.....	\$ 16.83	4.18
OPERATOR: Sweeper.....	\$ 24.44	12.24
PAINTER (Parking Lot and Highway Striping Only).....	\$ 16.39	3.56
TRUCK DRIVER, Includes all axles including Dump Trucks.....	\$ 15.35	0.02
TRUCK DRIVER: Distributor Truck.....	\$ 17.89	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 14.72	4.39

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted

because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SUPPLEMENTAL SPECIFICATION
ASPHALT PRICE ADJUSTMENT

GENERAL REQUIREMENTS AND CONDITIONS

- (a) This specification contains price adjustment provisions for asphalt cement and emulsified asphalt used on Vermont Agency of Transportation (Agency) construction projects and produced under Sections 303, 404, 406, 415, and 490 of the Standard Specifications, or as otherwise designated in the Contract Documents. This price adjustment clause is being inserted in this Contract to provide for either additional compensation to the Contractor or a payment to the Agency, depending upon an increase or decrease in the average price of asphalt cement during the construction of this project.
- (b) Emulsified asphalt shall be subjected to a correction factor of 0.45, applied to the quantity of material supplied. This corrected quantity shall be used for Asphalt Price Adjustment as specified and computed herein.
- (c) These provisions apply to this Contract only as specified in the procedures provided herein. No further asphalt cement and/or emulsified asphalt price adjustments will be allowed under this Contract.
- (d) It is understood by the Contractor that a price adjustment increase may cause the Agency to decrease the quantities of the Contract pay items subject to adjustment under these provisions. Provisions providing for decreased quantities and item cancellation in this paragraph are separate and take precedence, notwithstanding any other provisions of this Contract.
- (e) No price adjustment will be allowed beyond the Contract Completion Date or any applicable interim completion dates.
- (f) Any increase in the total Contract amount due to price adjustment under these provisions will not be justification for an extension of time under Subsection 108.11.
- (g) The Contractor hereby agrees that its bid prices for this Contract include no allowances for any contingencies to cover increased costs for which adjustment is provided herein.

PRICE ADJUSTMENT PROCEDURES

- (1) Prior to advertising for bids, an Index Price for asphalt cement will be established by the Agency upon consideration of the New York State DOT average monthly price for asphalt cement, or other monthly index deemed appropriate by the Director of Finance and Administration. The Index Price will be set monthly on or about the last day of the month. The Contract Index Price will be the most recent Index Price set by the Agency at the time of advertising for bids. This price will be as specified in the Special Provisions and will be the base from which price adjustments are computed.
- (2) For the duration of the Contract, Posted Prices for a metric ton (ton) of asphalt cement will be established monthly by the Agency. The Posted Prices will be established in the same manner as the Index Price.

- (3) A Price Adjustment will be paid or credited for asphalt cement only when the Posted Price of asphalt cement increases or decreases over its respective Index Price.
- (4) The Price Adjustment will be based upon the quantity of asphalt cement (QAC) and quantity of emulsified asphalt (QEA) incorporated in the work, determined as follows:
 - a. Batch Plants. QAC is determined using the cumulative actual binder content for each applicable item as reported on the batch ticket, excluding any percent of asphalt cement from Recycled Asphalt Pavement (RAP).
 - b. Drum-Mix Plants. QAC is determined based upon the metric tons (tons) of mix placed, multiplied by the actual binder content reported on the demand tickets, as verified by Agency personnel. In the event of multiple binder contents, the accepted quantity of mix at each binder content shall be determined, and the total QAC used shall be calculated accordingly. The accumulated asphalt cement total on the plant automation may be checked and verified by Agency personnel for each mix.
 - c. Emulsified Asphalt. QEA is as determined in accordance with Subsection 404.11.
- (5) The Price Adjustment to be paid shall be computed as follows:

$$PA = [(QAC + (ACEA \times 0.001 \times QEA)) \times (PP - IP)] \text{ [Metric]}$$

$$PA = [(QAC + (ACEA \times 0.05 \times QEA)) \times (PP - IP)] \text{ [English]}$$

where:

PA = Price Adjustment (LU in \$)
 IP = Index Price (\$/metric ton) or (\$/ton)
 PP = Posted Price on date of work (\$/metric ton) or (\$/ton)
 QAC = Quantity of Asphalt Cement (metric tons) or (tons)
 QEA = Quantity of Emulsified Asphalt (kilograms) or (CWT)
 ACEA = Asphalt Content of Emulsified Asphalt as follows:

Emulsified Asphalt Type	ACEA
CSS-1h	0.57
MS-1	0.55
RS-1	0.55
CRS-1p	0.63
CSS-1h Fog	0.28

- (6) The Contract bid prices for the applicable pay items will be paid separately under the Contract. The price adjustment will be calculated and paid in the same bi-weekly estimate as the applicable Contract work.
- (7) Payments for Price Adjustment, Asphalt Cement shall be debited or credited against the Contract price (Lump Unit) bid for Price Adjustment, Asphalt Cement.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
406.50 Price Adjustment, Asphalt Cement (N.A.B.I.)	Lump Unit

STATE OF VERMONT
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
MANAGEMENT OF LAKES AND PONDS
29 V.S.A. Chapter 11

RE Vermont Agency of Transportation
One National Life Drive
Montpelier, Vermont 05633-5001

Application Number 2012-017
Project: Replace the Floating Bridge across Sunset Lake, Brookfield
Project Identification Number: BR00-0023

BACKGROUND

On June 4, 2012, an application was received by the Department of Environmental Conservation (Department) in the Vermont Agency of Natural Resources from the Vermont Agency of Transportation (applicant) under the provisions of 29 V.S.A. Chapter 11, "Management of Lakes and Ponds," for authorization to replace the floating bridge in the public waters of Sunset Lake, Brookfield. The application was complete for noticing on June 13, 2012.

On June 20, 2012, state and local officials, abutting property owners, and others having an interest in this matter were notified of this application and given the opportunity to file written comments or request a public information meeting. The comment period closed on July 5, 2012. No request for a public information meeting was received. Additional plan details were received on March 11, 2013.

The Department has reviewed the application, public comments, and other relevant documents and information, and has found that sufficient information exists with which to determine whether this project will be consistent with the public trust doctrine and whether the project will adversely affect the public good as provided in 29 V.S.A. Section 405(b). The Department has relied on guidance provided by case law to make a decision regarding the proposed project's consistency with the public trust doctrine.

FINDINGS

1. **Jurisdiction:** Sunset Lake is a public water of the State of Vermont. The project encroaches beyond the shoreline as delineated by the mean water level of the lake. Therefore, the Department has jurisdiction under 29 V.S.A. Chapter 11.
2. **Project Description:** The project is the replacement of the floating bridge across Sunset Lake in Brookfield. The bridge is part of Vermont Route 65. The approaches and abutments will be reconstructed and new modular floating sections of bridge will be installed. Filter curtains will be installed along the approaches and in the lake to contain both of the work areas. Cofferdams, driven piles, will then be installed in the lake around each abutment to seal off the area for dewatering. Water will be pumped to dewatering bags or containment areas to capture sediment before the water returns to the lake. The dewatered areas will be excavated for construction of new abutments within the existing footprint. Abutment #1 on the western end of the bridge will be constructed on driven piles, and abutment #2 will be constructed on ledge. Once the concrete abutments have cured they will be backfilled with stone and granular material. Stone fill will be placed along the edge of the approaches on a slope of 1 vertical to 1.5 horizontal. Articulating ramp spans, approximately 30 feet long will

extend from each abutment and will accommodate expected water level fluctuations. Guide posts will be installed, two per ramp span, along the side of the spans. The bridge will be 22 feet wide with a 12-foot wide travel lane and two 5-foot wide sidewalks; the new bridge will be four feet wider than the previous one to accommodate the wider sidewalks. The bridge will be supported by floats under the bridge sections. The new bridge is designed to float higher out of the water than the current bridge to prevent wood rot. Timber railings will extend the length of the bridge on both sides and tie into the guard rail on the approaches. The completed project will provide ADA compliant access to the bridge. The bridge will be constructed in a modular fashion which will be easier to complete and will allow for it to be disassembled in the future if necessary.

3. **Project Purpose:** The purpose of the project is to restore traffic by installing a replacement in the same location that will require less maintenance in the future.
4. **Excessiveness for Stated Purpose:** Installing a replacement bridge, which will require less maintenance in the future, in the same location as the old one is not excessive. The floats are specifically designed to withstand the environmental conditions at this location.
5. **Less Intrusive Feasible Alternatives:** Installing the replacement bridge in the same location as the old one is the least intrusive feasible alternative.
6. **Measures to Reduce Impacts on Public Resources:** Work areas will be isolated from the adjacent lake water with coffer dams and filter curtains.
7. **Placement of Fill:** Some fill currently in the lake around the abutments will be removed and replaced, but the overall amount of fill will not increase.
8. **Effects on Water Quality:** The work areas will be enclosed with filter curtains and cofferdams. The area within the cofferdams will be dewatered before construction. Only clean stone will be used. The cofferdams and curtains will be removed once the construction is complete. If these measures are followed any minimal negative impacts to water quality will be limited to during construction.
9. **Effects on Fish and Wildlife Habitat:** There was no information received regarding adverse impacts to habitat. The abutments will be faced with loose rock and therefore provide better habitat than a concrete face. The new bridge will not have any additional impact over the existing one.
10. **Effects on Aquatic and Shoreline Vegetation:** The project will be limited to the existing bridge right of way (footprint) and not significantly impact aquatic or shoreline vegetation. Some existing shoreline vegetation will be removed; however any existing large trees will not be removed. The disturbed areas will vegetate after the construction is complete. The long-term impact on vegetation will be negligible.
11. **Effects on Navigation and Other Recreational and Public Uses, Including Fishing and Swimming:** The project will not adversely impact navigation, recreation or other public uses. The project will have a positive impact by improving pedestrian access to the bridge and restoring vehicular traffic. The purpose of the project is transportation across the pond and not to provide recreational opportunities. Swimming and fishing from the bridge will not be prohibited or encouraged but allowed as long as it does not interfere with transportation.

official duties, use vessels with internal combustion motors in the lake for the purposes of constructing the bridge. Section 3.1(c) of the VUPW states, "[t]he rules in this section shall apply to all lakes, ponds and reservoirs that are public waters and are located entirely within the State of Vermont regardless of their surface area unless ... law enforcement, emergencies or the performance of official duties by a governmental agency require otherwise."

4. Water being pumped from the work area shall be pumped to dewatering bags or to a containment area to allow the fines to settle before returning to the lake. Turbid water shall not be discharged directly to the lake.
5. Cofferdams and any sandbags used for the project shall be removed from the lake. Sand shall not be dumped or left in the lake.
6. No mature or large trees shall be cut as a part of the project. Woody vegetation shall be saved prior to constructing the access road for the purpose of replanting in the disturbed area. Disturbed areas shall be seeded and mulched immediately following construction.
7. Once project work commences, it shall be accomplished as quickly as possible to avoid prolonged disturbance to the surrounding area.
8. This permit shall expire 30 years from the effective date of this permit. The area shall be restored to the preexisting conditions unless otherwise approved by the Department. If a renewal is desired, an application shall be filed at least 90 days prior to the expiration date. A renewal decision will be based on the relevant statutory criteria and Department rules, procedures and policies prevailing at that time.
9. The permittee shall allow the Commissioner of the Department, or his/her duly authorized representative, at reasonable times and upon presentation of credentials to enter upon and inspect the permitted property and the project to determine compliance with this permit and have access to and copy any records required to be kept pursuant to this permit.
10. This permit and conditions are binding upon the permittee and co-permittee(s). It may not be transferred without the prior written approval of the Department.
11. This permit is issued subject to the terms herein and may be revoked at any time for: failure by the applicant to disclose all relevant facts during the application process which were known at that time; misrepresentation of any relevant fact at any time; non-compliance with the terms and conditions of the permit; or a change in the factors associated with the encroachment's effect on the public trust or public good so that on balance the Department finds that the encroachment adversely affects the public trust or public good.
12. This permit does not convey any title or interest to the lands lying under public waters or waters affected, nor does it deprive the Department of the right to order the removal of the project and restoration of the area affected.
13. This permit does not grant any exclusive rights or privileges which would impair any rights possessed by other riparian or littoral owners of the State of Vermont. It does not grant any right, title or easement to or over any land not owned in fee by the permittee, nor does it authorize any damage to private property or invasion of private rights or the violation of federal, state or local laws or regulations.

12. **Consistency with the Natural Surroundings:** Once completed the new bridge will not be any more noticeable than the existing bridge. The completed project will not alter the natural surroundings and will be consistent with the existing natural surroundings.
13. **Consistency with Municipal Shoreland Zoning Ordinances and Applicable State Plans:** No adverse comments were received during the investigation from local and state offices and the project is considered to be consistent with municipal shoreland zoning ordinances and applicable state plans.
14. **Cumulative Impact:** Replacing the floating bridge with a new one, which will require less maintenance, in the same location will not have a significant cumulative impact.
15. **Public Good Analysis:** The project may have minor short-term impacts in the project area on water quality and vegetation during construction activities. The project will not adversely impact habitat, the natural surroundings, or navigation and other public uses. The Department has reviewed the application and other relevant documents and information and has determined that the project will not adversely affect the public good.
16. **Public Trust Analysis:** Public uses occurring in the project area include fishing and travel on across the bridge. The project will not have a significant adverse impact on the public trust resource or uses. Replacing the bridge will ensure continued passage of traffic. The purpose of the project is transportation across the pond and not to provide recreational opportunities. Swimming and fishing from the bridge will not be prohibited or encouraged but allowed as long as it does not interfere with transportation. The public benefits associated with the project outweigh any negative impacts the project will have on the public trust uses.

DECISION AND PERMIT

Based upon the foregoing Findings, it is the decision of the Department that the project described herein, as set forth in the above Findings and in the project application and plans on file with the Department, complies with the criteria of 29 V.S.A. § 405, and is consistent with the Public Trust Doctrine.

In accordance with 29 V.S.A. §403 and §408, permission is hereby granted to the Vermont Agency of Transportation (permittee) and any co-permittee(s) to carry out the project in accordance with the following conditions:

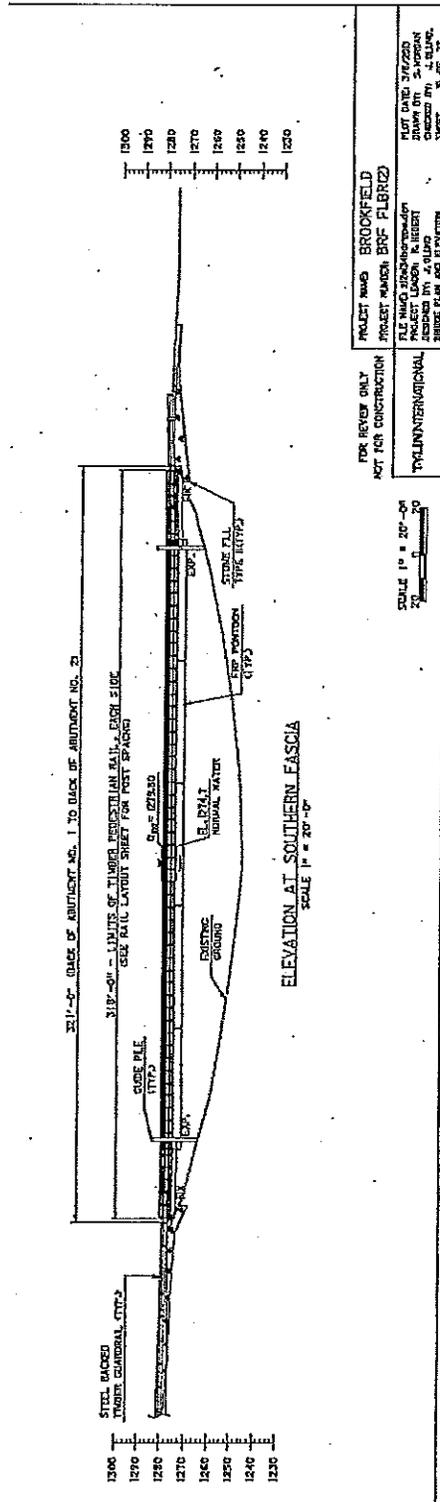
1. The project shall be carried out in strict accordance with the application received on June 4, 2012 and deemed complete on June 13, 2012; the additional plans received March 11, 2013; the above Findings; the conditions of this permit; and such minor modifications as may be approved in writing by the Department.
2. Any contractor(s) working on the approved project shall contact the Department and request co-permittee status. The contractor(s) shall not conduct work under this authorization without first obtaining co-permittee status via Attachment A. Once the project is complete and the area stabilized the contractor(s) may request termination of co-permittee status via Attachment B.
3. The use of internal combustion motors is prohibited generally on Sunset Lake under Appendix A of the Vermont Use of Public Waters Rules (VUPW). However, pursuant to Section 3.1(c) of the VUPW, the permittee may, as a governmental agency performing

14. This permit does not relieve the permittee of the responsibility to comply with any other applicable federal, state and local laws, regulations and permits.
15. The Department, by issuance of this permit, accepts no legal responsibility for any damage direct or indirect of whatever nature and by whomever suffered arising out of the project described.
16. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
17. This permit shall become effective ten (10) days after notice by the Department of the issuance of this permit in accordance with 29 V.S.A. §405(c).
18. Any person aggrieved by this decision may file an appeal pursuant to 10 V.S.A. Chapter 220 §8504. Any appeal of this decision shall be filed with the Clerk of the Environmental Court within 30 days of the date of the decision. The filing of such an appeal stays the effectiveness of this decision. The appellant shall attach to the Notice of Appeal the entry fee of \$250.00, payable to the State of Vermont. The address for the Environmental Court is 2418 Airport Road, Barre, Vermont 05641-8701 (Telephone: 802-828-1660). For further information, see the Vermont Rules for Environmental Court Proceedings, available on-line at www.vermontjudiciary.org. The Notice of Appeal shall specify the parties taking the appeal and the statutory provision under which each party claims party status; shall designate the act or decision appealed from; shall name the Environmental Court; and shall be signed by the appellant or their attorney. In addition, the appeal shall give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the permittee or any permit involved in the appeal. The appellant shall also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings.

David K. Mears, Commissioner
Department of Environmental Conservation

By  Digitally signed by Susan Warren
Date: 2013.06.19 10:15:43 -04'00'
Susan Warren
Lakes and Ponds Section Chief

CROSS SECTION



<p>FOR REVIEW ONLY NOT FOR CONSTRUCTION</p>	<p>PROJECT NAME: BROOKFIELD PROJECT NUMBER: BRG-FLBR22</p>
<p>SCALE 1" = 20'-0"</p>	<p>FILE NUMBER: 2012-038 DATE: 3/17/2012 DESIGNED BY: J. ALLEN CHECKED BY: J. ALLEN SHEET NO. 7 OF 27</p>
<p>TRAILINTERNATIONAL</p>	

**ATTACHMENT A
REQUEST FOR CO-PERMITTEE STATUS**

Title 29 VSA Chapter 11 Management Of Lakes And Ponds

Contractor Request for Co-Permittee Status

I hereby request co-permittee status for myself as an individual or on behalf of my business to conduct work authorized by Title 29 VSA Chapter 11 Management of Lakes and Ponds Permit Number 2012-023. In requesting co-permittee status, I hereby certify under the penalty of law that I have read and am familiar with the terms and conditions of the permit and that all activities related to this authorization request will be done in accordance with the issued permit.

Signature: _____ Date: _____

Name (please print): _____

Title: _____

Contracting Individual, Partnership, Association, or Corporation:

Address: _____

Business Phone/FAX: (____) _____ / (____) _____

Job Site Contact and Phone: _____

Project Name: _____

Anticipated Construction Start Date _____

Anticipated Construction Completion Date _____

SUBMIT ORIGINAL, COMPLETED FORM TO:

WATERSHED MANAGEMENT DIVISION

1 National Life Drive

Main Building Floor 2

Montpelier, VT 05620-3522

ATTACHMENT B
REQUEST TO TERMINATE CO-PERMITTEE STATUS

Title 29 VSA Chapter 11 Management of Lakes and Ponds

Contractor Request for Termination of Co-Permittee Status

I hereby request termination of co-permittee status for myself as an individual or on behalf of my business to conduct work authorized by Title 29 VSA Chapter 11 Management of Lakes and Ponds Permit Number _____. I certify that for the construction activity that was authorized is complete and permanent stabilization has been accomplished on all disturbed areas on the site. The permittee(s) remains responsible for compliance with all conditions of the permit.

Signature: _____ Date: _____

Name (please print): _____

Title: _____

Contracting Individual, Partnership, Association, or Corporation:

Address: _____

Business Phone/FAX: (____) _____ / (____) _____

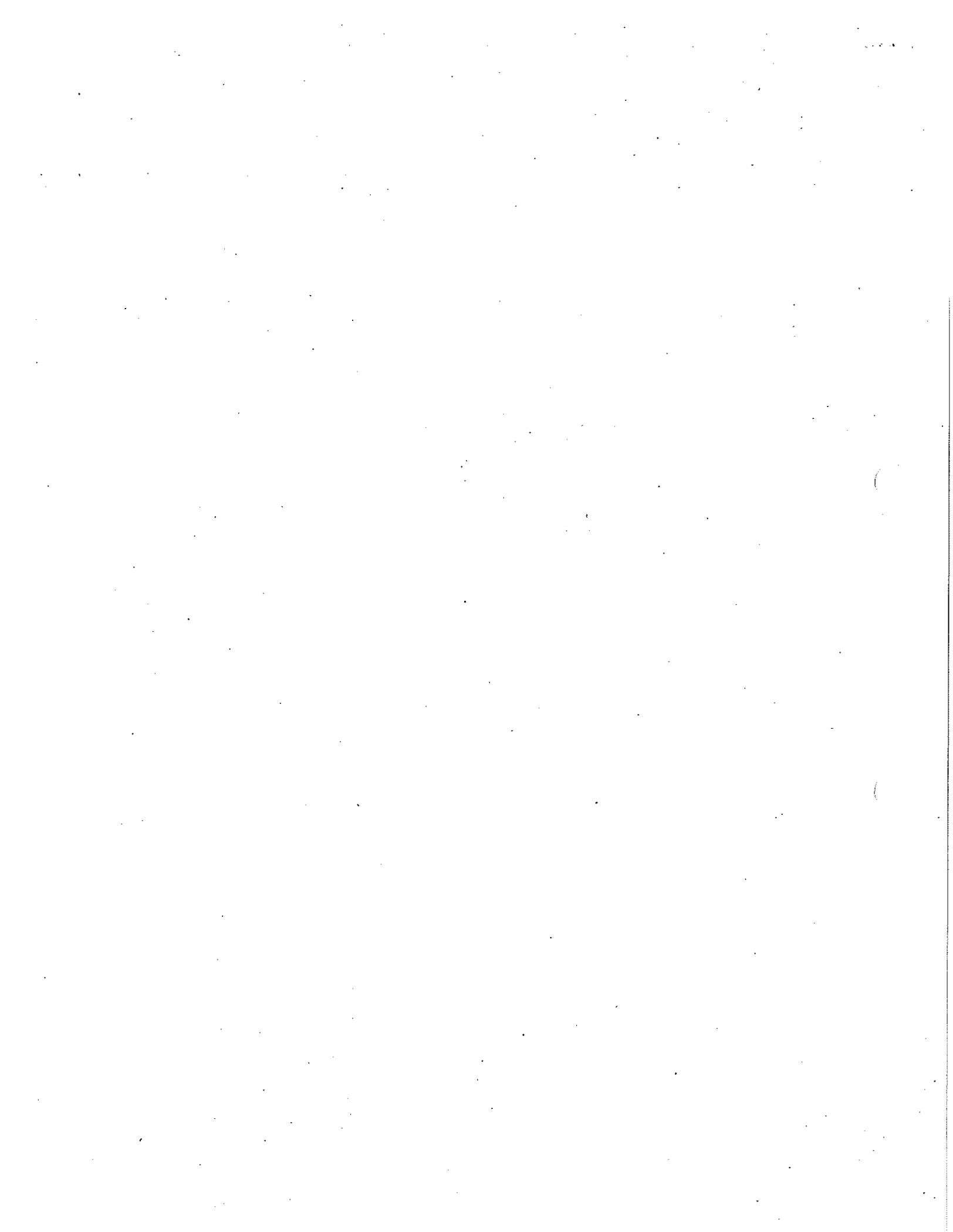
Job Site Contact and Phone: _____

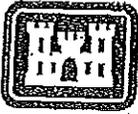
Project Name: _____

Construction Completion Date _____

SUBMIT ORIGINAL, COMPLETED FORM TO:

WATERSHED MANAGEMENT DIVISION
1 National Life Drive
Main Building Floor 2
Montpelier, VT 05620-3522





US Army Corps
of Engineers
New England District

Appendix B: Category 1 Self-Verification Form

Submit this form a minimum of two weeks before work commences to the following address. Call (802) 872-2893 with any questions.

U.S. Army Corps of Engineers
New England District, Regulatory Division
Vermont Project Office
8 Carmichael Street, Suite 205
Essex Junction, Vermont 05452
Fax: 802 879-7638
Katrina.l.sedney@usace.army.mil

Permittee: VTrans
Permittee Address: One National Life Drive, Montpelier VT 05633
City, State & Zip Code: _____

Phone(s) and Email: (802) 828-3963 John Lepore @ state.vt.us

Work Locations/Address: VT 65 (Floating Bridge) Brookfield, VT
City, State & Zip Code: _____

Latitude/Longitude coordinates: 44° 02' 32.82" N 72° 36' 17.48" W

Waterway name: SUNSET LAKE

Description of Work: Floating Bridge replacement with minor work on the abutments and approaches.

Work will be done under the following Appendix A categories (circle all that apply):

- I. Inland Waters and wetlands: a b c d e f
II. Navigable Waters: a b c d e f g

Area of wetland impact: 178 square feet (SF) 3 sf (temp) + 175 (perm)

Area of waterway impact: 1,593 SF 764 sf (temp) + 829 sf (perm)

Length of stream impact: 0 linear feet (LF)

Will American Recovery and Reinvestment Act (ARRA) funds be used for any of this project? NO

Contractor: _____

Contractor Address: _____

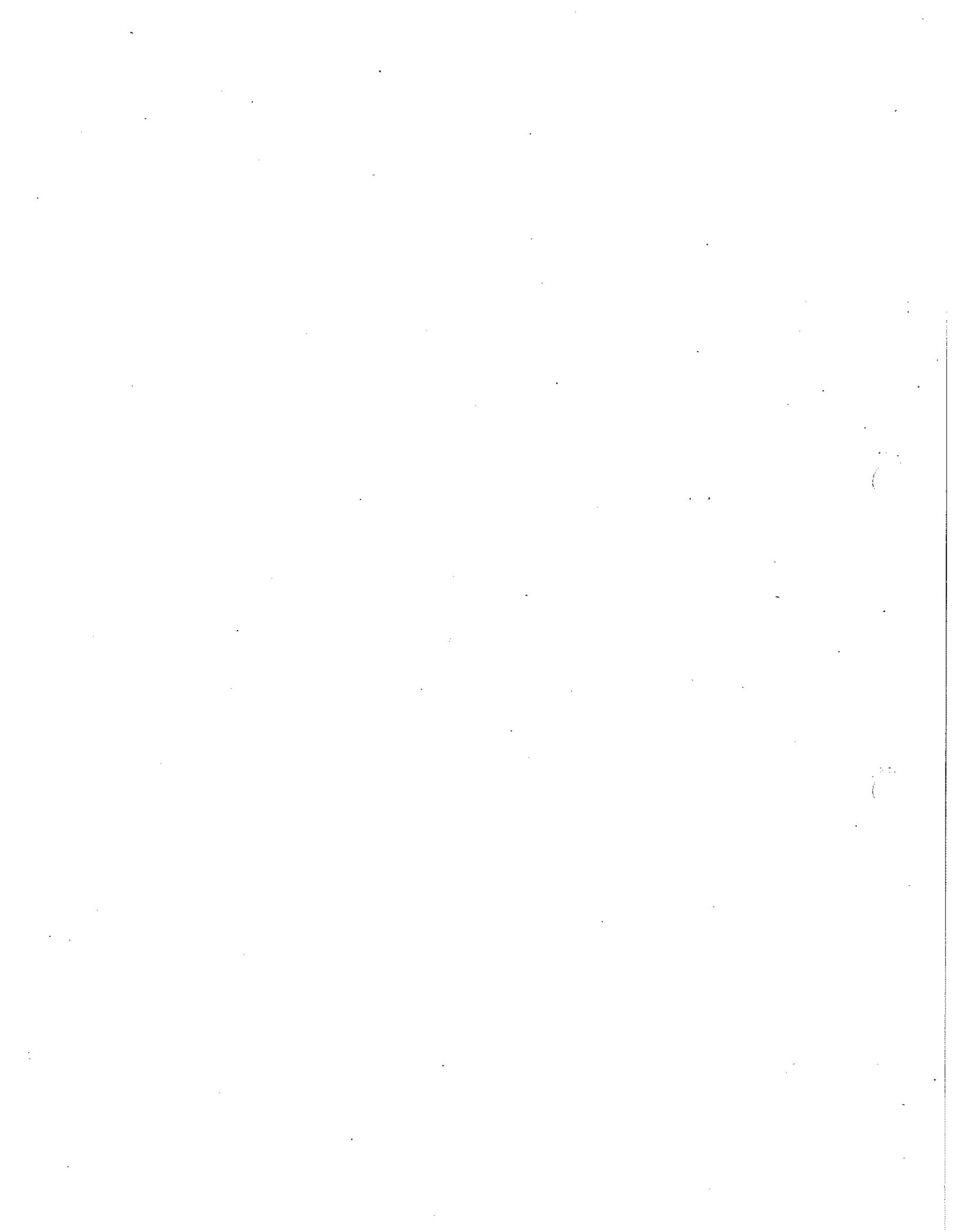
City, State & Zip Code: _____

Phone(s) and Email: _____

Proposed Work Dates: Start: _____ Finish: _____

Your signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and conditions of Category 1 of this Vermont General Permit.

Permittee Signature: John Lepore Date: 10-JUNE-2013





**US Army Corps
of Engineers**[®]
New England District
696 Virginia Road
Concord, MA 01742-2751

PUBLIC NOTICE

Date: December 11, 2012
Contact: Marty Abair
E-mail: Martha.a.abair@usace.army.mil

REISSUANCE OF THE DEPARTMENT OF THE ARMY VERMONT GENERAL PERMIT (GP)

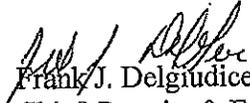
The New England District, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, Massachusetts 01742-2751 hereby announces the reissuance of the statewide Vermont General Permit (GP), pursuant to 33 CFR 325.5(c)(3), for minimal-impact activities within the State of Vermont. The prior PGP expired on December 5, 2012. The Vermont GP continues the expedited review process for activities in Corps jurisdiction under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. This public notice is issued in accordance with 33 CFR 325.10 to ensure potential applicants for permits are informed of the requirements of 33 CFR 320-330 and of the steps required to obtain permits for activities in waters of the U.S.

General permits are encouraged under the President's plan to streamline state and Federal regulatory programs. This GP is designed to authorize activities formerly covered under the previous GP program and the prior GP that expired on December 5, 2012. This reissued GP became effective on December 6, 2012. Continued utilization of the general permit process in place of the NWP's will provide important benefits to the public, including simplifying the process, expediting decisions, and providing necessary environmental protection.

Projects with minimal individual and cumulative effects on the aquatic environment will be approved administratively under this GP. Projects not meeting the GP's terms and general conditions, of which General Condition 3 requires projects authorized by the GP to have minimal effects and secondary (indirect) and cumulative adverse environmental impacts, are subjected to an Individual Permit review. Federal exemptions, which are not necessarily the same as the State of Vermont's exemptions, are also not altered by the GP. In addition, for projects authorized pursuant to this GP, project proponents must obtain the appropriate or State approvals when required in order for this GP authorization to be valid.

Projects that the Corps authorized under the previous VT GP prior to issuance of this GP shall remain authorized as specified in each authorization. Activities authorized pursuant to 33 CFR 330.3 (activities occurring before certain dates) are not affected by this GP.

You may view the Vermont GP on our web site at www.nae.usace.army.mil. Select "Regulatory/Permitting," "Permits," "State General Permits" and then "Vermont." Please contact Marty Abair at (978) 318-8484 or martha.a.abair@usace.army.mil for more information.



Frank J. Delgiudice
Chief, Permits & Enforcement Branch

Enclosure

DEPARTMENT OF THE ARMY GENERAL PERMIT STATE OF VERMONT

The New England Division of the U.S. Army Corps of Engineers (Corps) hereby issues this General Permit (GP) that expedites review of minimal environmental impact work associated with the aquatic environment of navigable and inland waters and wetlands within the State of Vermont. This general permit for Vermont is known as the Vermont General Permit.

I. GENERAL CRITERIA:

Activities with **minimal impacts**, as specified by this GP's terms (Pages 1-6), general conditions (GC) (Pages 6) and Appendix A - Definition of Categories, qualify for authorization under the GP in either Category 1 or Category 2.

Proponents should first review Appendix A - Definition of Categories to see if a project meets either:

- **Category 1: Self-Verification, Category 1 Notification Form required**
Projects meeting Category 1 criteria and which are in full compliance with the general conditions may be authorized under this GP after submission of the Category 1 Notification Form.
- **Category 2: Reporting.**
An application to and written verification from the Corps is required for these projects.

If you determine that your project is eligible for Category 1 as defined in Appendix A, you must then ensure that your project is in full compliance with this GP's terms and general conditions. If any of these terms and conditions are not met, your project must be reviewed in the Category 2 or the Individual Permit category. The Individual Permit thresholds are defined in Appendix A and the Individual Permit procedures are briefly described on Page 6. This GP does not affect the Corps Individual Permit review process or activities exempt from Corps regulation.

II. ACTIVITIES COVERED:

- Work and structures that are located in, under, or over any navigable water of the United States¹, the excavating from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters (regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899); and
- The discharge of dredged or fill material into waters of the U.S. [regulated by the Corps under Section 404 of the Clean Water Act (CWA)]. This GP also covers secondary impacts², which are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. The Corps does not regulate secondary impacts unless there is an actual placement of dredged or fill material.

¹ Waters of the U.S., inland waters and wetlands, and navigable waters of the U.S. are defined at Appendix A, Endnotes/Definitions.

² See GC 3 on Page 7 and Appendix A, Endnote 4 for more information on secondary impacts.

III. PROCEDURES:

A. State Approvals

Applicants are responsible for applying for and obtaining any required State approvals (see GC 1). Federal and State jurisdictions may differ in some instances. State permits may be required for specific projects regardless of the general permit category.

In order for authorizations under this GP to be valid, a Water Quality Certification (WQC) under Section 401 of the CWA (33 USC 1341) or waiver thereof must be obtained from the VT ANR, Water Quality Division prior to the commencement of work in Corps jurisdiction. The VT ANR has granted WQC for GP Category 1 activities provided the Corps exercises its discretionary authority to review any project covered under Category 1 when notified by the VT ANR that such project represents a threat to water quality. Therefore, a separate 401 WQC application is not required for activities involving fill in waters of the U.S. authorized under Category 1 of this GP.

The VT ANR conditionally granted WQC for GP Category 2 activities listed in Appendix A of this GP provided the Corps notifies the VT ANR and the interagency review team (USFWS, USEPA, VT ANR and the Corps) finds that the activity is reasonably likely to have minimal or no impact on water quality. The VT ANR retains the right to require an Individual WQC for any Category 2 activity. The VT ANR will respond within the same response times required of the Federal resource agencies.

B. Corps Authorizations

General permit authorizations consist of both Category 1 and 2 activities (see Appendix A). The thresholds outlined in this document are intended to ensure that the GP results in no more than a minimal impact to the aquatic environment. The Corps will coordinate review of all Category 2 activities with Federal and State agencies, as appropriate, and may require project modifications or mitigation to minimize impacts.

• Category 1 – (Self-Verification, Category 1 Notification Form required)

- If you self-verify that your project qualifies for Category 1, your project is authorized under this GP and you are required to submit the Category 1 Notification Form at Appendix B to the Corps
- Prospective permittees should carefully review this GP to determine whether applying to the Corps under Category 2 prior to commencing the authorized activity is required. Consultation with the Corps and/or outside experts may be necessary to ensure compliance with this GP's GCs and related Federal laws such as the National Historic Preservation Act (see GC 7), the Endangered Species Act (ESA) (see GC 9) and the Wild and Scenic Rivers Act (see GC 11). Project proponents are encouraged to contact the Corps with Category 1 eligibility questions.
- Secondary impacts must be included when determining if a project qualified for Category 1 (see GC 3).
- Fill area includes all temporary and permanent fill.
- Projects not meeting the Category 1 eligibility criteria are reviewed under Category 2 or Individual Permit procedures.

Enforcement cases. This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with an on-going Corps or EPA enforcement action until such time as the enforcement action is resolved or the Corps determines that the activity may proceed independently without compromising the enforcement action. The Corps may choose not to accept applications or issue permits to any applicant with outstanding violations.

Category 2 (Corps Verification, Application and Written Approval Required)

Eligibility

Activities in Vermont that are:

- Subject to Corps jurisdiction;
- Meet the definition of Category 2 in Appendix A; and
- Meet the general conditions of this GP (Pages 7-16)

require written approval from the Corps. These projects will be reviewed through interagency screening to determine whether such activities may be authorized under this GP. **To be eligible and subsequently authorized, an activity must result in no more than a minimal impact to the aquatic environment as determined by the Corps in coordination with the interagency review team, in addition to meeting the criteria listed above.**

This may require project modifications involving avoidance, minimization or compensatory mitigation³ for unavoidable impacts to ensure the net effects of a project are minimal.

To ensure compliance with this GP's general conditions, consultation with the Corps, other Federal or State resource agencies, or independent consultants, may be necessary. This includes consultation with the VT State Historic Preservation Officer (VT SHPO) (Page 16) and, when projects are proposed in Addison, Rutland or Bennington counties, the Stockbridge-Munsee Tribal Historic Preservation Officer (THPO) to ensure compliance with GC 7 and the VT ANR to comply with applicable general conditions. Also, note the review thresholds under Category 2 apply to single and complete projects only (see GC 5).

Application Procedures

Applicants must apply directly to the Corps at the Vermont Project Office (VPO), and are encouraged to simultaneously apply to the VT ANR for any related permits. Upon receipt of an application for a Category 2 activity, the Corps will determine if it:

- (1) Requires additional information;
- (2) Is appropriate for screening with the Federal resource agencies and State agencies (see Screening Procedures);
- (3) Is ineligible under the terms and/or conditions of this GP;
- (4) Requires project modification, mitigation or other special conditions to minimize impacts and protect the aquatic environment to be eligible for this GP; or
- (5) Requires Individual Permit review regardless of whether the terms and conditions of this GP are met, based on concerns for the aquatic environment or any other factor of the public interest (GC 4).

Information Typically Required

In order to consider an application complete and review it with the interagency review team, the applicant must submit complete information. Please see www.nae.usace.army.mil for a more comprehensive checklist. Select "Regulatory", "Permits" "Forms" and then "Application and Plan Guideline Checklist." This information includes, but is not limited to:

- A completed Corps application form (ENG Form 4345⁴)
- Plans that illustrate the proposed work in reference to the limits of Corps jurisdiction as applicable. Plans should be on 8.5" x 11" paper and contain all other appropriate information.
- A description of the proposed work, project purpose and location, including a locus map and photographs,

³ Compensatory mitigation for waterway/wetland impacts may take the form of payment into the Ducks Unlimited In-Lieu Fee Program, wetland restoration, enhancement, creation, and/or preservation. See www.nae.usace.army.mil/regulatory, "Mitigation" and then "Vermont" for more information.

⁴ Located at www.nae.usace.army.mil/regulatory under "Forms."

if applicable.

- Data sheets to support wetland delineations. (See GC 2.)
- A narrative description of the habitat(s) including dominant plant community(ies) present, soil type and relevant existing and adjacent land uses.
- A demonstration that there will be no more than minimal direct and indirect impacts to the aquatic resource(s) resulting from the project. Consideration should be given to impacts associated with expected hydrologic changes, effects on riparian habitat, forest fragmentation, impacts to headwater and ephemeral streams (Endnote 17), stormwater discharges and other potential water quality and wetland habitat impacts. (See GC 3.)
- Information on Federal endangered and threatened species and critical habitat, and State endangered and threatened species that occur or may occur in the project area. (See GC 9.)
VT ANR, Department of Fish & Wildlife, Nongame and Natural Heritage program contact information is provided on Pages 16-17. Refer to Additional References on Pages 18-19 for additional information.
- Identification and description of potential impacts to essential fish habitat. (See GC 10.)
- Identification of potential discharges of pollutants to waters, including potential impacts to impaired waters, in the project area. (See GC 22.) Refer to Additional References on Pages 18-19.
- Identification, quantification, and description of potential impacts to aquatic resources, including delineation of wetlands, special aquatic sites, special wetlands and vernal pools. (See GC 27.)

Federal/State Screening Procedures

The Corps, Federal resource agencies [U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), and National Marine Fisheries Service (NMFS)] and VT ANR will comprise the interagency review team. The Corps will also coordinate with the VT SHPO and, as appropriate, the THPO as to potential impacts of a project on historic properties.

Screening of Category 2 projects will be either through email, fax, mail or at interagency screening meetings at the Corps VPO. Projects are coordinated on a regular basis or as necessary to facilitate prompt decision making. The Corps and the Federal resource agencies, at the branch chief or equivalent level, may agree on certain activities that do not need to be coordinated at these meetings. The Corps, VT ANR, VT SHPO and, as appropriate, the THPO will review/screen complete applications for Category 2 activities with impacts between 3,000 square feet (SF) and 5,000 SF. The Corps will review/screen all complete applications for Category 2 projects with impacts greater than 5,000 SF with the interagency review team, VT SHPO and, as appropriate, the THPO.

The Corps may determine on its own or in consultation with the interagency review team, if applications for Category 2 work:

- Are eligible under the GP as proposed;
- Are ineligible under the terms and/or conditions of this GP;
- Require additional information;
- Will require project modification, mitigation or other special conditions to avoid or minimize adverse environmental impacts and protect the aquatic environment to be eligible for authorization under this GP;
- or
- Require Individual Permit review irrespective of whether the terms and general conditions of this GP are met, based on concerns for the aquatic environment or any other factor of the public interest (see GC 4).

The Federal resource agencies, the VT ANR, VT SHPO and, as appropriate, the THPO must provide verbal comments to the appropriate Corps project manager in the VPO within 10 business days of receiving the Determination of Eligibility (DOE) from the Corps. These verbal comments may consist of a request for additional information, recommendations for modification, mitigation, or special conditions to avoid or minimize adverse environmental impacts associated with the aquatic environment, and to ensure the terms and

general conditions of the GP are met, or a request for a site visit.

Federal resource agency additional information requests shall be within their area of expertise, commensurate to the level of impact, and agreed upon by the Corps. If additional information is requested, the agencies are allowed an additional 10 business days after receipt of this information to provide recommendations for modifications, mitigation or special conditions. Unless additional information is requested, the verbal notice must be confirmed with a written response to the appropriate Corps project manager at the VPO within an additional 10 working days from the date of the verbal comment.

The Corps may contact the applicant either by phone or in writing if there are concerns. If the applicant is unable to resolve the concerns or modify the project, the Corps may determine that a project is ineligible under this GP, "kickout" the project to the Individual Permit review category, and begin its Individual Permit review procedures. The Corps will send a "Kickout Letter" to the applicant and copy the VT ANR and the commenting Federal resource agency on any written correspondence to the applicant. The Corps may reinstate a project's eligibility under the GP provided concerns are satisfied.

The VT ANR within 10 business days of the date the project information is received from the Corps may require an Individual 401 WQC review for any Category 2 project. This 10-day notice to the Corps of the requirement for an individual 401 WQC review may be verbal and is not required to be fully documented, but must be directed to the appropriate Corps Project Manager at the VPO. The VT ANR must confirm the requirement for an individual 401 WQC review with a written response to the appropriate Corps project manager within an additional 10 working days from the date of the verbal comment. If the VT ANR does not notify the Corps as outlined herein, WQC is conditionally granted for the project. In order for the Corps GP authorization to be valid, the WQC must be obtained or waived prior to the commencement of work.

If the Corps and Federal resource agencies determine that the activity is eligible for the GP, the Corps will send an authorization letter directly to the applicant. The Corps will generally issue an eligibility determination within 60 days from the date of a complete application. If the Corps determines that the activity is not eligible under the GP or that additional information is required, the Corps will notify the applicant in writing and will send a copy of this notification to VT ANR.

Emergency Situation Procedures

Emergency situations are limited to sudden, unexpected occurrences that could potentially result in an acceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process an application under standard procedures. If an emergency situation requires action in less than 30 days after the occurrence, it qualifies for the amended notification procedures described below.

Notification Procedures for Emergency Situations: The Federal resource agencies, VT ANR and the VT SHPO will each designate an alternate to be contacted in the event the regular contact is unavailable. The VT ANR, VT Emergency Management (VTEM) or FEMA will notify the Corps within 24 hours of the occurrence of a disaster and advise the Corps of the nature of the occurrence and any known remedial and/or protective measures. The Corps will notify agency representatives that a disaster has occurred within one working day of being notified by the VT ANR, VTEM or FEMA.

When an application for Category 2 work is received that the Corps VPO determines is an "emergency" as defined above, the Corps will e-mail or fax a copy of the plans and DOE to the agency representatives and their alternates. The resource agencies would then have 16 working hours to notify the Corps if they have any comments on authorization of the project under the GP. Objections to the Corps determination of an "emergency" situation will not be accepted. If no response is received at the VPO within 16 working hours, the Corps will proceed with a decision on the application. If the resource agencies have comments on the proposal,

they will have 16 working hours to put their comments in writing. If written comments from the Federal agencies are not received at the VPO within 16 working hours, the Corps will proceed with a decision on the application.

If a Federal agency requests that an Individual Permit be required for a project or requests modifications to the project based on concerns within their area(s) of expertise, the Corps will notify the applicant within 8 working hours of receipt of that request that the project as proposed does not qualify for authorization under the GP and that an Individual Permit will be required. In any event, the Corps will notify the applicant within 48 working hours of commencement of the screening process as to whether the project may proceed under the GP.

IV. INDIVIDUAL PERMIT

Work that is in the Individual Permit category as listed in Appendix A, or that does not meet the terms and conditions of this GP, will require an application for an individual permit from the Corps of Engineers (see 33 CFR 325.1). The applicant should submit the appropriate application materials [including the Corps application form (ENG 4345)] at the earliest possible date to expedite the permit review process. General information and application forms can be obtained at our web site or by calling us (see Page 16). An Individual 401 WQC will be required from the appropriate VT resource agency(ies). Filing an Individual Permit application does not relieve the applicant from their obligation to obtain all necessary State approvals from the appropriate Vermont resource agency(ies) or any applicable local approvals.

V. GENERAL CONDITIONS (and supporting general information):

The following conditions apply to activities authorized under this GP, including all Category 1 (self-verification) and Category 2 (screening) activities:

General Requirements:

- 1. Other Permits.** Authorization under this general permit does not obviate (i.e., to make unnecessary) the need to obtain other Federal, state, or local authorizations required by law.
- 2. Federal Jurisdictional Boundaries.** Applicability of this GP shall be evaluated with reference to Federal jurisdictional boundaries. Applicants are responsible for ensuring that the boundaries depicted on permit drawings satisfy the Federal criteria defined at 33 CFR 328-329. See www.nae.usace.army.mil/regulatory>> Jurisdictional Limits and Wetlands for more information.
- 3. Minimal Effects, Secondary (Indirect) and Cumulative Impacts.** (a) Projects authorized by this GP shall have no more than minimal individual and cumulative environmental impacts as determined by the Corps. Applicants must demonstrate that there will be no more than minimal direct and indirect impacts to the aquatic resource(s) resulting from the project. Mitigation may be required to offset unavoidable impacts. (b) Secondary impacts to waterway and/or wetland areas, (e.g., areas drained, flooded, cleared, excavated or fragmented) shall be added to the total fill area when determining the project review category (Category 1, 2 or Individual Permit review). Secondary and cumulative impacts are defined at Appendix A, Endnote 4.
- 4. Discretionary Authority.** Notwithstanding compliance with the terms and general conditions of this GP, the Corps retains discretionary authority to require either a Category 2 or an Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest (33 CFR 320.4(a)). This authority is invoked on a case-by-case basis whenever the Corps determines that the potential impacts of the proposal warrant either a Category 2 or an Individual Permit review based on the concerns stated above. This authority may be invoked for projects with cumulative environmental impacts that are more than minimal or if there is a special resource or concern associated with a particular project that is not already covered by the remaining conditions of the GP and that warrants greater review. Whenever the Corps notifies an applicant that either a Category 2 or Individual Permit review is required, authorization under this GP is void and no work may be conducted until the Corps issues the required authorization or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this GP.
- 5. Single and Complete Projects.** This GP shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single project and/or all planned phases of a multi-phased project shall be treated together as constituting one single and complete project, unless the Corps determines that a component has independent utility. For linear projects, such as power lines or pipelines with multiple crossings, the "single and complete project" (i.e., single and complete crossing) will apply to each crossing of a separate water of the U.S. (i.e., single waterbody) at that location; except that for linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project, and may be reviewed for Category 1 eligibility. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies. If any crossing requires a Category 2 activity, then the entire linear project shall be reviewed as one project under Category 2 provided that the impact thresholds in Appendix A are met. Also, this GP shall not be used for any activity that is part of an overall project for which an Individual Permit is required, unless the Corps determines the activity has independent utility. Note that modifications to State permits do not constitute a separate project. Modifications which involve Corps jurisdiction will be screened at the regular screening in order to ascertain compliance with the GP. Keep in mind that a linear project normally qualifying as a Category 1 project will trigger a Corps review if the impacts exceed this GP's general conditions.

6. Permit On-Site. For Category 2 projects, the permittee shall ensure that a copy of this GP and any accompanying authorization letter with attached plans are at the site of the work authorized by this GP whenever work is being performed and that all construction personnel are aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this GP. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means this GP and the authorization letter (including its drawings, plans, appendices and other attachments) and also includes permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

General Conditions Related to National Concerns:

7. Historic Properties. Any activity authorized by this GP shall comply with Section 106 of the National Historic Preservation Act. Information on the location and existence of historic resources can be obtained from the VT SHPO (See page 16) and the National Register of Historic Places. Project proponents shall apply to the Corps for all projects that would otherwise qualify for Category 1 if there is the potential for an effect on a historic property within the permit area or any known historic property that may occur outside the permit area. Historic properties include those that are eligible for inclusion, but not necessarily listed on the National Register. If the permittee, during construction of work authorized herein, encounters a previously unidentified archaeological or other cultural resource within the area subject to Corps jurisdiction that might be eligible for listing in the National Register of Historic Places, he/she shall stop work and immediately notify the Corps, the VT SHPO and, when work is proposed in Addison, Rutland or Bennington counties, the Stockbridge-Munsee Native American tribe.

8. National and Corps Lands. Activities authorized by this GP shall not impinge upon the value of any National Wildlife Refuge, National Forest, National Park or any other area administered by the U.S. FWS, U.S. Forest Service, or National Park Service. No Category 1 work is allowed on Corps properties and Corps-controlled easements (see Appendix A, Endnote 9).

9. Federal and State Endangered Species.

- a. No activity may be authorized under this GP which:
 - May affect a threatened or endangered species, a proposed species, designated critical habitat, or proposed critical habitat as identified under the Federal Endangered Species Act (ESA),
 - Would result in a "take" of any Federally listed threatened or endangered species of fish or wildlife, or
 - Would result in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.
- b. Proponents for Category 1 and 2 projects shall ensure there are no impacts to Federally-listed threatened or endangered species or critical habitat and should ensure that there are no impacts to State threatened or endangered species.
- c. Proponents for Category 1 and 2 projects shall notify the Corps if any of the actions in 9a may occur and if any Federally listed threatened or endangered species or critical habitat, or proposed species or critical habitat, is in the project area or may be impacted by the project. For Category 1 projects, the Corps may then notify the proponent that the project will be reviewed under the Category 2 or Individual Permit procedures and if so the proponents shall not begin work until the Corps issues a written authorization.

d. Applicants should also provide information on state threatened and endangered species. The Information Typically Required section on Page 3 provides guidance. Contact information for the VT ANR, Department of Fish & Wildlife, Nongame and Natural Heritage program is provided on Pages 16-17, and more information is provided at Additional References, Pages 18-19.

10. Essential Fish Habitat (EFH). As part of the GP screening process, the Corps will coordinate with the NMFS in accordance with the 1996 amendments to the Magnuson-Stevens Fishery, Conservation and Management Act (MSFCMA) to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed EFH and is broadly defined to include "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Any work in the following streams in the Connecticut River watershed that are stocked with Atlantic salmon shall not be authorized under Category 1 of this GP and must be screened for potential impacts to EFH. For additional EFH information and/or locations, see 50 CFR 600 (www.nmfs.noaa.gov), www.nero.nmfs.gov/RO/DOC/appguide1.html or contact NMFS (see Page 16).

- Black River (from its mouth in Springfield to its headwaters)
- Connecticut River
- Deerfield River
- Nulhegan River
- Ompompanoosuc River
- Ottauquechee River
- Passumpsic River
- Paul Stream
- Saxtons River
- Stevens River
- Wells River
- West River
- White River
- Williams River

11. Wild and Scenic Rivers. Any activity that occurs in the designated main stem of, within 0.25 mile up or downstream of the designated main stem of, or in tributaries within .25 miles of the designated main stem of a National Wild and Scenic River, or in "bordering and contiguous wetlands" (see Appendix A, Endnote 1) that are adjacent to the designated main stem of a National Wild and Scenic River, or that has the potential to alter flows within a river within the National Wild and Scenic River System, is not eligible for Category 1 regardless of size of the impacts. This condition applies to both designated Wild and Scenic Rivers and rivers officially designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. Currently there are no designated National Wild and Scenic Rivers in Vermont. The Missisquoi River, from its headwaters in Lowell to the Canadian border in Troy (25 miles) and from the Canadian border in East Richford to Enosburg Falls (25 miles) and the Trout River have been officially designated by Congress as study rivers.

12. Federal Navigation Project. Any structure or work that extends closer to the horizontal limits of any Corps navigation project than a distance of three times the project's authorized depth shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys.

13. Navigation. (a) There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. (b) The permittee understands and agrees that if future operations by the U.S. require the removal, relocation or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

14. Federal Liability. In issuing this GP, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest; (c) damages to persons, property or to other permitted or unpermitted activities or structures caused by the activity authorized by the GP; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future

modification, suspension or revocation of this permit.

Minimization of Environmental Impacts:

15. Avoidance, Minimization and Mitigation. Discharges of dredged or fill material into waters of the U.S. and any secondary impacts shall be avoided and minimized to the maximum extent practicable. Mitigation of unavoidable direct and indirect impacts may be required on a case-by-case basis.

16. Heavy Equipment in Wetlands. Heavy equipment other than fixed equipment (drill rigs, fixed cranes, etc.) working in wetlands shall not be stored, maintained or repaired in wetlands, unless it is less environmentally damaging otherwise, and as much as possible shall not be operated there. Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure (typically <3 psi), or shall not be located directly on wetland soils and vegetation; it shall be placed on construction mats or corduroy roads (defined at Appendix A, Endnote 16) that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. Construction mats are to be placed in the wetland from the upland or from equipment positioned on swamp mats if working within a wetland. Dragging construction mats into position is prohibited. Construction mats shall be managed in accordance with the Construction Mat Best Management Practices (BMPs) (Appendix A, Endnote 20). Other support structures that are less impacting and are capable of safely supporting equipment may be used with written Corps authorization. Similarly, not using mats during frozen, dry or other conditions may be allowed with written Corps authorization. (See GC 17 below.) An adequate supply of spill containment equipment shall be maintained on-site. Corduroy roads and construction mats are considered as fill whether they're installed temporarily or permanently.

17. Temporary Fill. No temporary fill shall be placed in waters of the U.S., including wetlands, unless a) it is specifically authorized in writing by the Corps, or b) the project qualifies for the non-reporting Category 1 (the combined temporary and permanent fill totals less than 3,000 SF, it meets the Appendix A Category 1 definition, and it is in compliance with this GP's terms and general conditions).

- All temporary fill shall be stabilized to prevent its eroding into portions of waters of the U.S. where it is not authorized.
- Waters of the U.S. where temporary fill was discharged shall be restored (see GC 18).
- Unconfined temporary fill authorized for discharge into waters of the U.S. shall consist of material that minimizes impacts to water quality (e.g. sandbags or clean gravel and/or stone).
- Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric laid on the pre-construction wetland grade. Construction mats are excluded from this requirement.
- Temporary fill shall be removed as soon as it is no longer needed, and it shall be disposed of at an upland site and suitably contained to prevent its subsequent erosion into waters of the U.S.
- Construction mats and corduroy roads (see GC 16) are considered as temporary fill when they are removed immediately upon work completion. The areas must be restored in accordance with GC 18.
- If temporary fill is staged and then returned to its original location, e.g., sewer projects through wetlands, the original location shall be restored.

18. Work Site Restoration.

- Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be properly stabilized. Any seed mix shall contain only plant species native to New England and shall not contain any of the plant species listed in Appendix B - "Invasive Species and Other Unacceptable Plant Species" in the "Mitigation Guidance for New England District Mitigation Plan Checklist," provided at <http://www.nae.usace.army.mil/Regulatory/Mitigation/CompensatoryMitigationGuidance.pdf> and referenced in the Planting Plan section. This list may be updated periodically.

- The introduction of non-native invasive and noxious species in disturbed areas is prohibited and any spread of such invasive plant species shall be controlled. See Additional References on Pages 18-19. The Corps lists these species in the above mentioned checklist in the Invasive and Noxious Species section.
- In areas of authorized temporary disturbance, if trees are cut they shall be cut at ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.
- Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

19. Bank Stabilization. Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction should be designed to minimize environmental effects, effects to neighboring properties, etc. to the maximum extent practicable. Applicants must use the least intrusive method to stabilize the bank, following this sequential minimization process: avoidance, diversion of overland flow, vegetative stabilization, stone-sloped surfaces, and walls. Vertical walls/bulkheads must only be used in situations where reflected wave energy can be tolerated. This generally eliminates bodies of water where the reflected wave energy may interfere with or impact on harbors, marinas, or other developed shore areas. Refer to Additional References on Pages 18-19.

20. Sedimentation and Erosion Control. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, vegetated filter strips, geotextile silt fences or other devices, shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. Such measures shall be capable of preventing erosion, of collecting sediment, suspended and floating materials, and of filtering fine sediment. The temporary devices shall be removed upon completion of work and the disturbed areas shall be stabilized. The sediment collected by these devices shall be removed and placed at an upland location, in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

21. Waterway/Wetland Work and Crossings

- (a) All temporary and permanent crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, to maintain existing low flows, and to not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
- (b) No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water.
- (c) To meet the objective of aquatic organism passage in (a) and (b) above, all temporary and permanent crossings of rivers, streams, brooks, etc. (hereon referred to as "streams") shall meet the following performance standards in order to qualify for Category 1 (refer to Additional References on Pages 18-19):
 - i. Design the structure to maintain a streambed composition and form throughout the culvert similar to and continuous with the adjacent reaches. To do this:
 - o Design and install streambed material and bedforms if not adequately supplied and developed naturally,
 - o Design profile and alignment through structure similar to those of adjacent stream reaches,
 - o Design culvert elevation to remain embedded for the life of the structure and in consideration of future channel conditions.
 - ii. Maintain velocities, turbulence and depths within the structure similar to those found in adjacent stream reaches across a range of desired flows.
- (d) The requirements to comply with the performance standards in (c) above in order to proceed as a Category 1 project do not apply to the following:

i. Temporary crossings in place for less than 90 days (the requirements in (a) do apply). Temporary culverts must be embedded unless they're installed during low flow (Jul. 15 – Oct. 1) and it's placed on geotextile fabric laid on the stream bed to ensure restoration to the original grade;

ii. Constructed drainage systems designed primarily for the conveyance of storm water or irrigation. Also, non-tidal drainage and irrigation ditches excavated on dry land are not Federally-regulated.

(e) Applicants proposing new crossings, or maintenance or replacement of serviceable crossings should refer to the Guidelines for the Design of Stream/Road Crossings for Passage of Aquatic Organisms in Vermont. Refer to Additional References on Pages 18-19.

(f) Applicants shall use the least intrusive and environmentally damaging method to construct the stream crossing, following this sequential minimization process: bridge spans, open bottom arches or embedded culverts. Refer to Additional References, Pages 18-19.

(g) Culverts at waterbody crossings shall be installed in such a manner as to preserve hydraulic connectivity, at its present level, between the wetlands on either side of the road. The permittee shall take necessary measures to correct wetland damage due to lack of hydraulic connectivity.

(h) Projects using retrofit methods increasing flow velocity or slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe) are not allowed in Category 1, either as new or maintenance activities.

(i) No projects involving open trench excavation in flowing waters, except riprap installation, are allowed under Category 1. Open trench excavation projects may qualify for Category 1 provided (1) the work doesn't occur in flowing waters (requires using management techniques such as temporary flume pipes, culverts, cofferdams, etc.) and (2) normal flows are maintained within the stream boundary's confines (see Appendix A, Endnote 6). Projects utilizing these management techniques must meet the other Category 1 requirements (see Appendix A, Page 1) and all of this GP's terms and general conditions.

(j) For projects that otherwise meet the terms of Category 1, in-stream (e.g., rivers, streams, brooks, etc.) construction work shall be conducted only during the low flow period of July 15 to October 1 in any year. Projects that are conducted outside that time period are ineligible for Category 1 and shall be reviewed under Category 2, regardless of the waterway and wetland fill and/or impact area.

(k) Work impacting upstream or downstream flood profiles must be reviewed under Category 2.

22. Discharge of Pollutants.

(a) All activities involving a discharge into waters of the U.S. authorized under this GP shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 USC 1251) and applicable State and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this GP, the authorized work shall be modified to conform to these standards within six months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the Corps in consultation with the EPA.

(b) All projects authorized by this GP shall be designed, constructed and operated to minimize or eliminate the discharge of pollutants. Category 2 projects will be reviewed to determine if a project may result in a discharge of relevant pollutants to an impaired water. See the Additional Information Required section on Page 4.

(c) Unless otherwise notified by the VT ANR, applicants may presume that the Section 401 WQC for this GP constitutes the Section 401 WQC for their Section 404 activity, provided the terms and conditions of this GP are met.

23. Floodplain Work.

(a) In order to qualify for authorization under Category 1 of this GP, projects shall result in no more than a minimal decrease in natural valley storage, and shall not result in an increase in the base flood elevation (where hydraulic information necessary to make this determination is available).

(b) There shall be no Category 1 projects located within a FEMA designated Special Flood Hazard Area as shown on the most current flood insurance studies and maps published by FEMA and adopted by the municipality within which the proposed project is located.

(c) Any project located within a FEMA designated Special Flood Hazard Area shall comply with minimum NFIP regulations, or local Flood Hazard Area regulations if more restrictive.

Note: Refer to Additional References, Pages 18-19.

24. Spawning and Breeding Areas. Discharges of dredged or fill material, and/or suspended sediment producing activities in fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas, during spawning or breeding seasons shall be avoided. Impacts on these areas shall be minimized to the maximum extent practicable during all times of year.

25. Storage of Seasonal Structures. Seasonal or recreational structures such as pier sections, floats, etc., that are removed from the waterway for a portion of the year shall be stored in an upland location, located above ordinary high water and not in a wetland.

26. Environmental Functions and Values. (a) The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner that minimizes adverse impacts on fish, wildlife and natural environmental values. (b) The introduction of invasive plant species identified by any Federal agency in disturbed areas is prohibited and any spread of such invasive plant species shall be controlled. Refer to GC 18 and Additional References on Pages 18-19.

27. Protection of Special Aquatic Sites and Special Wetlands, including Vernal Pools.

Special Aquatic Sites (SAS): Projects with any temporary or permanent fill in SAS (Endnote 7), or that could adversely affect SAS, whether directly or indirectly, do not qualify for Category 1. This does not apply to "inland wetlands," but does apply to the other SAS types listed at Endnote 7.

Special Wetlands: When jurisdiction is triggered (see Activities Covered, Page 1), projects in or that could adversely affect Special Wetlands (Endnote 8), whether directly or indirectly, do not qualify for Category 1. Special wetlands are vernal pools, bogs, fens, and wetlands which provide habitat for threatened or endangered species as designated by the State of Vermont Natural Heritage Program. See Additional References on Pages 18-19 for additional references.

Vernal Pools (VP): These are a type of special wetland (Endnote 8). Category 1 excludes projects in or within 200' of a VP on the property when jurisdiction is triggered. This does not apply to temporary impacts associated with construction mats in previously disturbed areas of existing utility project right-of-ways (e.g., transmission lines, gas pipelines) or linear transportation projects (e.g., roads, highways, railways, trails, airport runways and taxiways) provided there is a Vegetation Management Plan or equivalent BMPs that avoid, minimize and mitigate acts to aquatic resources. The applicant must minimize surrounding upland impacts to the greatest extent practicable, with the effort to minimize impacts being commensurate with the value of the pool. Impact minimization should be in accordance with *Best Development Practices: Conserving pool-breeding amphibians in residential and commercial development in the northeastern U.S.*, Calhoun and Klemens, 2002; and *Science and Conservation of Vernal Pools in Northeastern North America*, Calhoun and deMaynadier, 2008, specifically Chapter 12, Conservation Recommendations section, Page 241. (See Additional References, Pages 18-19). For example, site clearing, grading and construction activities should be limited to <25% of the VP terrestrial habitat, and roads and driveways should be excluded from the VP envelope. For Category 2 projects, the applicant shall delineate all VPs on the property (see GC 2). The Corps may waive this requirement on a case-by-case basis.

28. Fluvial Geomorphic Processes. (a) Wherever practicable, projects should be designed to accommodate the natural tendencies of the fluvial system. This should greatly enhance the likelihood of long-term success of the project and minimize the chance of exacerbating an otherwise undesirable physical adjustment process. Recognition of these processes requires assessment of physical parameters and characteristics of the watershed, the water and sediment regimes; the channel and floodplain, the anthropogenic influences and constraints on the reach concerned and to what extent sediment transport continuity in the reach can be attained. (b) Applicants should consult with the VT River Management Program Stream Alteration Engineer for assistance in compliance with this condition.

Note: Refer to Additional References on Pages 18-19 for additional information.

Procedural Conditions:

- 29. Inspections.** The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is being or has been performed in accordance with the terms and conditions of this permit. The Corps may also require post-construction engineering drawings for completed work, and post-dredging survey drawings for any dredging work.
- 30. Maintenance.** (a) The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit. Permittees must contact the Corps if maintenance will not take place or if they want to modify the existing project design. (b) The requirement to maintain the authorized work does not include maintenance of dredging projects. Maintenance dredging is subject to the review thresholds in Appendix A and/or any special conditions included in a written Corps authorization. Note: Refer to Additional References on Pages 18-19 for information on maintaining stream restoration projects.
- 31. Property Rights.** This GP does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations.
- 32. Modification, Suspension, and Revocation.** This GP may be either modified, suspended, or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7. Any such action shall not be the basis for any claim for damages against the U.S.
- 33. Restoration.** The permittee, upon receipt of a notice of revocation of authorization under this GP, shall restore the wetland or waterway to its former conditions without expense to the U.S., and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.
- 34. Special Conditions.** The Corps may impose other special conditions on a project authorized pursuant to this GP that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, constitutes a permit violation and may subject the permittee to criminal, civil or administrative penalties and/or restoration.
- 35. False or Incomplete Information.** If the Corps makes a determination regarding the eligibility of a project under this GP, and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the GP authorization shall not be valid and the U.S. Government may institute legal proceedings.
- 36. Abandonment.** If the permittee decides to abandon the activity authorized under this GP, unless such abandonment is merely the transfer of property to a third party, he/she may be required to restore the area to the satisfaction of the Corps.
- 37. Transfer of GP Verifications.** If the permittee sells the property associated with a GP verification, the permittee may transfer the GP verification to the new owner by submitting a letter to the Corps (see Page 16 for address) to validate the transfer. A copy of the GP verification must be attached to the letter and the letter must contain the following statement and signature: "When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this GP

and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

38. Enforcement cases. This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with a Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps or EPA as appropriate determines that the activity may proceed independently without compromising the enforcement action.

Duration of Authorization/Grandfathering:

39. Duration of Authorization. Activities authorized under this GP that have commenced (i.e., are under construction) or are under contract to begin construction in reliance upon this authorization, will remain authorized provided the activity is completed within twelve months of the expiration date on this permit, unless:

- a) the GP is either modified or revoked; or
- b) discretionary authority has been exercised in accordance with 33 CFR 325.2(e)(2).

Activities authorized and completed under Category 1 or 2 of this GP will continue to remain authorized after this GP's expiration date.

40. Previously Authorized Activities.

- (a) Projects that received written authorization from the Corps and that were completed under the previous GP's, nationwide permits, regional general permits or letters of permission, shall remain authorized as specified in each authorization letter.
- (b) Activities authorized pursuant to 33 CFR 330.3 ("Activities occurring before certain dates") are not affected by this GP.


Frank J. DelGiudice
Chief, Permits and Enforcement Branch

12-6-2012
DATE

VI. CONTACTS FOR VERMONT GENERAL PERMIT:

U.S. Army Corps of Engineers
New England District, Regulatory Division
Vermont Project Office
8 Carmichael Street, Suite 205
Essex Junction, Vermont 05452
(802) 872-2893, (802) 879-7638 fax
www.nae.usace.army.mil/reg/index.htm

Federal Endangered Species:
U.S. Fish and Wildlife Service
Federal Activities/Endangered Species
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087
(603) 223-2541
www.fws.gov/northeast/newenglandfieldoffice.htm

National Park Service
National Park Service
North Atlantic Region
15 State Street
Boston, Massachusetts 02109
(617) 223-5191

Vermont Agency of Natural Resources

Department of Environmental Conservation
Wetlands Program
Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
Alan.quackenbush@state.vt.us

Department of Environmental Conservation
Lakes and Ponds Program
Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
Susan.warren@state.vt.us

U.S. Environmental Protection Agency
New England Region
Wetland Protection Program Unit – OEP/CWP
JFK Federal Building 1 Congress Street, Suite 1100
Boston, MA 02114-2023
(617) 918-1399

Essential Fish Habitat:
National Marine Fisheries Service
Habitat Conservation Division (HCD)
One Blackburn Drive
Gloucester, Massachusetts 01930
(978) 281-9300

Historic Resources
State Historic Preservation Officer
Division for Historic Preservation
National Life Building
Drawer 20
Montpelier, Vermont 05620-0501
(802) 828-3211

Tribal Historic Preservation Officer
c/o Stockbridge-Munsee Community
P.O. Box 70
Bowler, Wisconsin 54416
(715) 793-3970
Area of concern: Addison, Rutland and
Bennington Counties

Department of Environmental Conservation
River Management Program
Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
Mike.kline@state.vt.us

Department of Environmental Conservation
Dam Safety Program
Facilities Engineering Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
Steve.bushman@state.vt.us

Vermont Department of Fish and Wildlife
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
Rich.kirn@state.vt.us

State endangered species
Vermont Department of Fish and Wildlife
Nongame and Natural Heritage Program
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
www.vtfishandwildlife.com/wildlife_nongame.ofm

VII. ADDITIONAL REFERENCES:

Page 4: Application. Refer to www.nae.usace.army.mil for a more comprehensive checklist. Select "Regulatory" "Permits" "Forms" and then "Application and Plan Guideline Checklist."

Page 4 & GC 9: Threatened and Endangered Species.

The VT F&W provides information on Federal and State species:

www.vtfishandwildlife.com/wildlife_nongame.cfm.

The VT ANR Environmental Interest Locator provides an interactive web based GIS map with documented locations:

http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/launch.jsp.

The U.S. Fish and Wildlife Service (U.S. FWS) provides information on Federal endangered species:

www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation_Project_Review.htm.

Page 4 and GC 22: Discharge of Pollutants - Impaired Waters and Stormwater Impaired Waters: The VT ANR lists and shows impaired waters and stormwater impaired waters at:

www.vtwaterquality.org/planning.htm.

GC 2: Federal Jurisdictional Boundaries.

(a) Corps Wetlands Delineation Manual, regional supplements, and Corps Wetland Delineation Data Sheets: www.nae.usace.army.mil/regulatory and then "Wetlands and Jurisdictional Limits.

(b) The National List of Plant Species that Occur in Wetlands (http://wetland_plants.usace.army.mil).

(c) The Natural Resources Conservation Service (NRCS) publishes the current hydric soil definition, criteria and lists: <http://soils.usda.gov/use/hydric>. For the Field Indicators for Identifying Hydric Soils in N.E., see www.neiwppcc.org/hydricsoils.asp.

GCs 18 and 26: Invasive Species.

(a) Information on what are considered "invasive species" is provided in our "Compensatory Mitigation Guidance" document at www.nae.usace.army.mil/regulatory under "Mitigation." The "Invasive Species" section has a reference to our "Invasive Species Control Plan (ISCP) Guidance" document, located at www.nae.usace.army.mil/regulatory under "Invasive Species," which provides information on preparing an ISCP.

(b) The June 2009 "Corps of Engineers Invasive Species Policy" is at www.nae.usace.army.mil/regulatory under "Invasive Species" and provides policy, goals and objectives.

GC 19: Bank Stabilization.

Corps Coastal Engineering Manual: Select "Products/Services" and then "Publications." Part 5, Chapter 7-8, a(2)c is particularly relevant. <http://chl.erdc.usace.army.mil>.

GC 21: Waterway/Wetland Work and Crossings

21(c): Performance standards in GC 21 are taken from Section 8 - Alternative Designs, in the document "Guidelines for the Design of Stream/Road Crossings for Passage of Aquatic Organisms in Vermont." These Guidelines are located at www.vtfishandwildlife.com/library.cfm, "Reports and Documents." This document should be referenced when designing and constructing stream crossing projects to help ensure compliance with GC 21 (a) - (c).

GC 23: Flood Hazard Management. www.anr.state.vt.us/dec/waterq/rivers/hm/rv_floodhazard.htm.

GC 27: Special Wetlands.

Refer to the VT ANR Environmental Interest Locator, which provides an interactive web based GIS map with locations of significant (wetland) natural communities. At the Locator select map layers, fish and wildlife, and

then significant natural communities:

http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/launch.jsp. Some wetlands are more valuable and sensitive to fragmentation, non-point source runoff, and other secondary impacts. Upland buffers are especially essential to protect their functions.

The following documents provide conservation recommendations for vernal pools:

Best Development Practices: Conserving pool-breeding amphibians in residential and commercial development in the northeastern U.S., Calhoun and Klemens, 2002. Chapter III, Management Goals and Recommendations, Pages 15 – 26, is particularly relevant. (Available for purchase at www.maineaudubon.org/resource/index.shtml and on Corps website*.)

Science and Conservation of Vernal Pools in Northeastern North America, Calhoun and deMaynadier, 2008. Chapter 12, Conservation Recommendations section, Page 241, is particularly relevant. (Available for purchase via the internet. Chapter 12 is available on Corps website*.)

* www.nae.usace.army.mil/regulatory under "Vernal Pools."

Cape Cod Curbing: For smaller roads and driveways, the most important design feature to consider is curbing. Granite curbs and some traditional curbing can act as a barrier to amphibian and hatchling turtle movements. Large numbers of salamanders have been intercepted in their migrations by curbs and catch basins. Use of Cape Cod curbs rather than traditional curbing may be one solution. Alternatively, where storm water management systems require more traditional curbing, it may be possible to design in escape ramps on either side of each catch basin.

The Vernal Pool Directional Buffer Guidance document is located at www.nae.usace.army.mil/regulatory under: 1) "State General Permits" and then "Maine," and 2) "Vernal Pools."

GC 28: Fluvial Geomorphic Processes. Consult with the VT River Management Program Stream Alteration Engineer for assistance in compliance with GC 28. Refer to information provided at: www.anr.state.vt.us/dec/waterq/rivers/htm/ry_management.htm.

GC 30: Maintenance. River restoration projects that are designed to accommodate the natural dynamic tendencies of the fluvial system are maintained in accordance with the project's design objectives (Category 1) or the Corps authorization letter (Category 2). These projects are generally designed to support and implement channel assessment and management practices that recognize a stream's natural dynamic tendencies.

APPENDIX A: DEFINITION OF CATEGORIES

<p>I. WATERS OF THE U.S. (INCLUDES WETLANDS) (other than Lake Champlain, Lake Memphremagog, Wallace Pond and adjacent wetlands)</p>	<p>Waters of the U.S.¹ are comprised of Inland Waters and Wetlands² & Navigable Waters of the U.S.³. Navigable waters in Vermont are those designated as navigable by Congress (33 CFR 329). This section excludes the following navigable waters: Lake Champlain, Lake Memphremagog, Wallace Pond & wetlands adjacent to these waterbodies (See II. Navigable Waters below).</p> <p>Projects not meeting Category 1 must apply to the Corps as either a Category 2 or Individual Permit project. All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 - 6) and general conditions (GC) (Pages 7 - 16).</p>		
<p>(a) NEW FILL/ EXCAVATION DISCHARGES</p>	<p>CATEGORY 1</p> <p><3,000 SF of waterway and/or wetland fill and secondary impacts⁴, (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill, and certain excavation discharges (except for incidental fallback⁵). Construction mats¹⁶ and corduroy roads are considered as fill (see GC 16).</p> <p>Construction mats of any area necessary to conduct activities that were previously authorized, authorized under Category 1, or not subject to regulation. Authorized construction mats must be in place for no more than 3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 18).</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • In-stream (e.g., rivers, streams, brooks, etc.) work limited to Jul 15-Oct 1 (see GC 21). <p>This category excludes:</p> <ul style="list-style-type: none"> • Fills in Athens, Brookline, Chester, Drummerston, Grafton, Newfane, Putney, Rockingham, Springfield, Townshend, or Westminster, VT. • Fills below OHW in EFH waters (see GC 10). • Activities excluded in GC 21, i.e., dams, dikes, or activities involving water diversions⁶ (other than dry hydrants used exclusively for firefighting activities with no stream impoundments); and slip lining. • Work in special aquatic sites (SAS)⁷ other than wetlands. • Work in special wetlands⁸ including work in vernal pools (VP) or within 200' of the VP's edge when jurisdiction is triggered. (This does not apply to temporary impacts associated with construction mats in previously disturbed areas of existing utility project right-of-ways (e.g., 	<p>CATEGORY 2</p> <p>3,000 SF to 1 acre waterway and/or wetland fill and secondary impacts⁴, (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill & certain excavation discharges (except for incidental fallback⁵). Construction mats and corduroy roads are considered as fill (see GC 16).</p> <p>Construction mats used for new construction activities with impacts of any size $\geq 3,000$ SF (see GCs 16 & 17).</p> <p>Projects sponsored by a Federal or State agency with proactive restoration¹⁰ as a primary purpose and impacts of any size $\geq 3,000$ SF. Net impacts must not be greater than minimal.</p> <p>Restoration and/or enhancement approved for use by a Corps-approved In-Lieu Fee program or Corps-approved mitigation bank, with impacts of any size $\geq 3,000$ SF.</p> <p>Specific activities with impacts $\geq 3,000$ SF required to affect the containment, stabilization, or removal of hazardous or toxic waste materials performed, ordered or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.</p> <p>Work in special wetlands⁸, including work in VPs or within 200' of the VP's edge when jurisdiction is triggered on the property.</p> <p>The applicant shall delineate all special wetlands⁸ including VPs on the property using Federal delineation methods (see GC 2). The Corps may waive these</p>	<p>INDIVIDUAL PERMIT</p> <p>≥ 1 acre waterway and/or wetland fill & secondary impacts⁴ (e.g., area drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill (except construction mats meeting Category 1 or Category 2 requirements) and certain excavation discharges (except for incidental fallback⁵).</p>

	<p>transmission lines, gas pipelines) for transportation projects (e.g., roads, highways, rail, trails, airport runways and taxways) provided they meet a Vegetation Management Plan or equivalent BMPs that avoid, minimize and mitigate impacts to aquatic resources.)</p> <ul style="list-style-type: none"> • Work on Corps properties & Corps-controlled easements • Structures, fill or work below OHW in the National Wild and Scenic River designated study segments of the Missisquoi River • Fills below OHW of the Trout River. 	<p>delineation requirement Wetland fill and/or secondary impacts (e.g., site clearing, grading and construction activities) should be limited to <25% of the VP habitat. Where practicable, roads & driveways should be excluded from the VP envelope.</p>	
<p>(b) BANK STABILIZATION PROJECTS</p>	<p>Inland bank stabilization <100 linear FT and an average of <1 CY of fill per linear FT below ordinary high water (OHW).</p> <ul style="list-style-type: none"> • In-stream work limited to Jul-15-Oct 1. • No work in VPs or within 200' of the VP's edge. • No work in SAS. • No work in EFH waters (see GC 10). • No work in Rivers of Concern. • No work on Corps properties and Corps-controlled easements. • No work below OHW in the National Wild and Scenic River designated study segments of the Missisquoi River. • No work below OHW of the Trout River. 	<p>Inland bank stabilization ≥ 100 linear FT, and/or an average of ≥ 1 CY of fill per linear foot below OHW.</p>	
<p>(c) RIVER/STREAM/BROOK WORK & CROSSINGS and WATERWAY/WETLAND CROSSINGS</p>	<ul style="list-style-type: none"> • In-stream (e.g., rivers, streams, brooks, etc.) work limited to Jul-15 - Oct 1 (see GC 21). • All stream crossings conform with the performance standards in GC 21. • Bridge spans, open bottom arches or embedded culverts are required. • Culverts at waterbody crossings shall preserve hydraulic connectivity, at its present level, between any wetlands on either side of the road. <p><u>Work in this category excludes:</u></p> <ul style="list-style-type: none"> • Projects using retrofit methods increasing flow velocity or slip lining (only for 1 - 3 above). • Work in SAS. • Open trench excavation in flowing waters except for riprap projects (See GC 21). • Structures, fill or work below OHW in the National Wild and Scenic River designated study segments of the Missisquoi River. 	<p>Projects sponsored by a Federal or State agency with proactive restoration⁶ as a primary purpose with impacts of any area exceeding Category 1. Net impacts must not be greater than minimal.</p>	

	<ul style="list-style-type: none"> Fills below OHW of the Trout River 		
<p>(d) REPAIR, REPLACEMENT IN KIND & MAINTENANCE OF AUTHORIZED FILLS</p>	<p>Repair/maintenance/replacement in kind of existing, currently serviceable, authorized fills with no expansion or change in use.</p> <ul style="list-style-type: none"> Conditions of the original authorization apply. Minor deviations in fill design allowed¹², except for stream crossings or dams. No fills in special wetlands⁸. No fills in SAS⁷ & EFH waters (see GC 10). No structures, fill or work below OHW in the National Wild and Scenic River designated study segments of the Missisquoi River. No fills below OHW of the Trout River. 	<p>Repair/maintenance/replacement in kind of existing, currently serviceable, authorized fills with expansion or a change in use <1 acre.</p> <p>Replacement of non-serviceable authorized fills, including expansion or a change in use, totaling <1 acre.</p>	<p>Repair/maintenance of existing, currently serviceable, authorized fills with expansion or a change in use >1 acre.</p> <p>Replacement of non-serviceable authorized fills, including expansion or a change in use, totaling ≥ 1 acre.</p>
<p>(e) MISC.</p>	<p>Activities required for the containment and cleanup of oil and hazardous substances.</p> <p>Fish and wildlife harvesting such as duck blinds.</p> <p>Temporary scientific measurement devices and survey activities, e.g., exploratory drilling, surveying, and sampling.</p> <p>Monitoring wells.</p> <p>Recreational gold mining.</p> <p>Does not include oil/gas exploration and fills for roads or construction mats.</p>	<p>Zebra Mussel Control Projects.</p> <p>Fishery habitat enhancement structures.</p> <p>Utility line crossings, water intakes and outfalls, and sea lamprey control projects.</p>	<p>Project where an EIS is required by the Corps.</p>
<p>(f) MISC. (applies only to NAVIGABLE WATERS OF THE U.S.² excluding Lake Champlain, Lake Memphremagog, Wallace Pond)</p>	<p>Repair, replacement in kind or maintenance of existing, currently serviceable, authorized structures.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> No expansion or change in use. Must be rebuilt in same footprint, however minor deviations¹² in structure design allowed. No structures, fill or work below OHW in the National Wild and Scenic River designated study segments of the Missisquoi River. 	<p>New and maintenance dredging³ up to 5,000 CY with upland disposal or beach nourishment. No impacts to SAS⁷.</p> <p>Aerial transmission lines.</p> <p>Floating or post supported docks or decks.</p> <p>Private, non-commercial, single-boat moorings.</p> <p>Utility lines installed by directional bores.</p>	<p>Maintenance dredging³ of any amount affecting a SAS⁷.</p> <p>New and maintenance dredging greater than 5,000 CY or in or affecting a SAS.</p> <p>Dredging with open water disposal.</p>

<p>II. NAVIGABLE WATERS OF THE U.S.³: 1</p> <p>waters were designated as navigable by Col (33 CFR 329).</p>		
<p>ALL NAVIGABLE WATERS OF THE U.S.³ - LAKE CHAMPLAIN, LAKE MEMPHREMAGOG, WALLACE POND and ADJACENT WETLANDS</p>	<p>Projects not meeting Category 1 must apply/report to the Corps as either a Category 2 or individual Permit project. All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1-6) and general conditions (Pages 7-16).</p>	<p>INDIVIDUAL PERMIT (IP)</p> <p>>5,000 SF waterway/wetland fill and secondary impacts⁴ (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent waterway fills.</p> <p>EIS required by the Corps.</p> <p>Repair/maintenance/replace ment in kind of currently serviceable authorized fills with expansion or a change in use >5000 SF.</p>
<p>(b) REPAIR, REPLACEMENT IN KIND AND MAINTENANCE WORK</p>	<p>CATEGORY 1</p> <p>No provisions for new or previously unauthorized fills in Category 1.</p> <p>Repair, replacement in kind or maintenance of existing, currently serviceable, authorized structures and fills.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • No expansion or change in use. • Must be rebuilt in same footprint, however minor deviations¹² in structure design allowed. 	<p>CATEGORY 2</p> <p><5,000 SF waterway/wetland fill and secondary impacts (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Includes boat ramps & bridge fills.</p> <p>Projects sponsored by a Federal or State agency with proactive restoration¹⁰ as a primary purpose and impacts of any size. Net impacts must not be greater than minimal.</p> <p>Repair/replacement in kind/maintenance of currently serviceable authorized fills with expansion or a change in use <5000 SF.</p> <p>Replacement of non-serviceable authorized fills, including expansion or a change in use, totaling <5000 SF.</p> <p>Construction mats of any area necessary to conduct activities that were previously authorized, authorized under Category 1, or not subject to regulation. Authorized construction mats must be in place for no more than 3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 18).</p>
<p>(c) DREDGING</p>	<p>No provisions for dredging in Category 1.</p>	<p>New or maintenance dredging¹³ ≥5,000 CY.</p> <p>Dredging affecting an SAS.</p> <p>All dredging with open water disposal.</p>

<p>(d) MOORINGS</p>	<p>Private, non-commercial, non-rental, single-boat moorings. <u>Provided:</u></p> <ul style="list-style-type: none"> • Chains or other connections may not rest on the bottom in SAS⁷ (eco-friendly mooring technology is required). • Not associated with a boating facility¹⁴. • No interference with navigation. • Moorings in a Federal Navigation Project (FNP)¹⁵ not associated with a boating facility. • Not located within the buffer zone of the horizontal limits of a FNP. 	<p>must be restored in place. Moorings that do not meet the terms of Category 1. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits of a FNP¹⁵.</p>	<p>Moorings and/or their moored vessels within the horizontal limits of a FNP¹⁵.</p>
<p>(e) PILE-SUPPORTED STRUCTURES AND FLOATS</p>	<ul style="list-style-type: none"> • Reconfiguration of existing authorized docks with no additional slips and no expansion. Seasonal private, residential pile-supported structures for navigational access extending no further waterward than 50 FT MHW, not >4 FT wide, & a dock deck area <500 SF. • Private, bottom-anchored floats and seasonal swim floats ≤400 SF. • Private boat & float lifts to authorized residential docks. <p>Provided for 1 - 4 above:</p> <ul style="list-style-type: none"> • No structure extends across >25% of the waterway width at MLW. • Not located over SAS⁷. • Not located within the buffer zone of the horizontal limits of an FNP¹⁵. 	<p>Private structures and floats for navigational access to the waterway that do not meet the terms of Category 1. Piers, docks, floats, and similar structures that provide public recreational uses such as fishing, swimming, access, etc. Non-fill structures to provide recreational access to the waterbody (e.g. stairways, etc.). Minor modifications to existing, permitted boating facilities. Structures or floats and/or vessels docked or moored at them within the buffer zone of the horizontal limits of a FNP¹⁵.</p>	<p>Structures or floats and/or vessels docked or moored at them within the horizontal limits of a FNP¹⁵. Structures or floats associated with a new or previously unauthorized boating facility.¹⁴</p>
<p>(f) BANK STABILIZATION PROJECTS</p>	<p>Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are in place for no more than 30 days and are removed within 15 days after use is discontinued. The placement of aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard. (See 33 CFR 66, Chapter I, subchapter C).</p>	<p>Bank stabilization <500 linear feet and an average of 1 CY per linear ft. of fill below OHW or less provided no wetland fill.</p>	<p>Bank stabilization ≥500 linear ft. and/or involving more than an average of 1 CY per linear FT of fill below OHW.</p>
<p>(g) MISCELLANEOUS</p>	<p>Structures/work in or affecting navigable waters and/or adjacent wetlands that are not defined under any previous headings. Includes but is not limited to utility lines, aerial transmission lines, pipelines, outfalls, intakes, and horizontal directional drilling. Zebra Mussel control projects. Fishery habitat enhancement structures.</p>	<p>Structures where an EIS is required by the Corps. Activities or activities with docked or moored vessels extending within the horizontal limits of a Corps FNP¹⁵ (does not include utility lines, aerial lines and subsurface crossings in Cat</p>	<p>Projects where an EIS is required by the Corps. Activities or activities with docked or moored vessels extending within the horizontal limits of a Corps FNP¹⁵ (does not include utility lines, aerial lines and subsurface crossings in Cat</p>

²**Inland Waters and Wetlands:** These are a subset of waters of the U.S., are regulated under Section 404 of the CWA, and include rivers, streams, lakes, ponds and wetlands, excluding Section 10 Navigable Waters of the U.S. The jurisdictional limits [33 CFR 328.4(c)] are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present.

³**Navigable Waters of the U.S.:** These are a subset of waters of the U.S., and are defined at 33 CFR 329. The jurisdictional limits [33 CFR 329.11] extend laterally to the entire water surface and bed of a navigable waterbody, which includes all the land and waters below the ordinary high water mark. Jurisdiction thus extends to the edge (as determined above) of all such waterbodies, even though portions of the waterbody may be extremely shallow, or obstructed by shoals, vegetation or other barriers.

Marshlands and similar areas are thus considered navigable in law, but only so far as the area is subject to inundation by the ordinary high waters. In Vermont these waters are: the Connecticut River, Lake Champlain, Lake Memphremagog, Wallace Pond, Ompompanoosuc River (to mile 3.8), Waits River (to mile 0.9), the Black River (mouth to mile 25 in Craftsbury), the Battenkill River (to mile 50 in Manchester), the Lamoille River (mouth to mile 79 in Greensboro), the Missisquoi River (including the North Branch; from the mouth to mile 88.5 in Lowell), Otter Creek (mouth to mile 63.8 in Procter), Winooski River (mouth to Marshfield), Moose River (from Passumpsic River to the Victory Town Line), Nulhegan River (mouth to its source including the East Branch, the Black Branch and the Yellow Branch), Paul Stream (mouth to the source), East Branch of the Passumpsic River (from the confluence with the Passumpsic River to East Haven), Passumpsic River (mouth to confluence with the East Branch), White River (mouth to its source), Wells River (mouth to Groton Pond).

⁴ **Direct, Secondary (Indirect), and Cumulative Impacts:**

Direct Impacts: The immediate loss of aquatic ecosystem within the footprint of the fill.

Secondary (Indirect) Impacts: These are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. (40 CFR 230.11 (h)). Secondary impacts are those impacts outside the footprint of the fill (e.g., beyond the bounds of the disposal site) that arise from and are associated with the direct discharge of dredged or fill material. Some examples are: I) Habitat Fragmentation. This occurs when a relatively undisturbed habitat block is interrupted or broken apart by roads, ditches, disturbance of vegetation, or development of structures. II) Interruption of Travel Corridors. Travel corridors are routes that many species travel on to find food, mates, shelter, and cover. Many aquatic species follow stream channels and wetlands, and follow established routes season after season. III) Vernal Pools. These are critically important breeding habitats for amphibians. Many amphibians disperse several hundred feet from their breeding ponds into the adjacent upland habitat after the breeding season has ended. IV) Hydrology, hydrological functions and non-point source impacts: A) Interference with the migration or movement of fish and shellfish from one area to another, such as placement of a dam eliminating access to spawning grounds for anadromous fish. B) Greater amounts of sediment, nutrients, and other pollutants such as lead, oil, gas, and salt that could impact wetlands and streams. Sediment causes turbidity, which reduces aquatic life and usually transports pesticides, heavy metals and other toxins into streams. This is especially a concern in watersheds where the streams are already listed as impaired by the VT ANR. C) Submerged aquatic vegetation is very dependent on light transmission and small changes in ambient turbidity can preclude it from growing in certain areas. D) Trout spawning areas are selected in areas that are well flushed and aerated, and new amounts of deposition may result in a spawning area being eliminated due to siltation of fish eggs. E) Physical effects such as erosion, accretion, entrenchment, sedimentation, embankment, channel or shoreline migration and failure to pass bedload material, organic matter and large woody debris.

Cumulative Impacts: The extent of past, present, and foreseeable developments in the area may be an important consideration in evaluating the significance of a particular project's impacts. Although the impacts associated with a particular discharge may be minor, the cumulative effect of numerous similar discharges can result in a large impact. Cumulative impacts should be estimated only to the extent that they are reasonable and practical.

⁵ **Incidental Fillback:** The term "discharge of dredged or fill material" also includes certain discharges resulting from excavation.

⁶ **Water Diversions:** Water diversions are activities such as bypass pumping or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions. See GC 21.

⁷ **Special Aquatic Sites:** Include inland wetlands, mudflats, vegetated shallows (permanently inundated areas that support rooted aquatic vegetation), and riffle and pool complexes. (40 CFR 230)

⁸ **Special Wetlands:** Jurisdictional vernal pools, bogs, fens, and wetlands which provide habitat for threatened or endangered species or species as designated by the State of VT Natural Heritage Program. See GC 27 for website. The following definitions for bogs, fens and vernal pools apply for the purposes of this GP:

Bog - A peat accumulating wetland with hydric, organic soils, a complete, or nearly complete, Sphagnum cover and a pH value ranging from 3.5 to 5.6 that receives water primarily from precipitation. Typical species include Sphagnum, leatherleaf and pitcher plant.

Fen - A peat accumulating wetland with hydric organic soils and a pH value ranging from 4.0 to 8.0. Sphagnum moss may be present, however, not as a complete cover. It generally receives water and minerals from runoff flowing through it. Typical species include low sedges, Sphagnum, other mosses and heath shrubs.

<p>Activities required for the containment and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 and any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS¹ must typically be restored in place at the same elevation.</p> <p>Scientific measurement devices & survey activities such as: exploratory drilling, surveying and sampling, provided that such structures do not restrict movement of aquatic organisms. Does not include oil and gas exploration or seismic testing, or fills for roads or construction mats.</p> <p>Fish and wildlife harvesting devices and activities such as pound nets, duck blinds, and small fish attraction devices such as open-water fish concentrators (sea kites, etc.). Provided: no hazard to navigation and activity is not in wetlands (except Sea Lamprey control projects)</p> <p>Debris removal.</p>	<p>Sea Lamprey control projects.</p> <p>Nuisance aquatic plant control projects.</p> <p>Utility lines installed by directional bore.</p>	<p>2).</p>
--	--	------------

End Notes/Definitions

¹ Waters of the United States (U.S.):

- a. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- b. All interstate waters including interstate wetlands;
- c. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - iii. Which are used or could be used for industrial purpose by industries in interstate commerce;
- d. All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- e. Tributaries of waters identified in paragraphs (a)-(d) above;
- f. The territorial seas;
- g. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in (a)-(f) above. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet this definition's criteria) are not waters of the U.S.
- f. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA.

Vernal Pools and Habitat: A vernal pool, also referred to as a seasonal forest pool, is a temporary body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during summer. Vernal pools have no permanent outlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), Jefferson salamander (*Ambystoma jeffersonianum*), and fairy shrimp (*Eubranchipus* sp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition. For the purposes of this GP, the presence of any of the following species in any life stage in any abundance level/quantity would designate the waterbody as a vernal pool: fairy shrimp, blue spotted salamanders, spotted salamanders or wood frogs. The Corps may determine during a Category 2 review that a waterbody should not be regulated as a VP based on available evidence. For the purposes of this GP, the VP Management Areas are the Vernal Pool Depression (includes the vernal pool depression up to the spring or fall high water mark, and includes any vegetation growing within the depression), Vernal Pool Envelope (area within 100 FT of the VP Depression's edge) and Critical Terrestrial Habitat (area within 100-750 FT of the Vernal Pool Depression's edge). [Note: Critical Terrestrial Habitat is defined as 100 - 750 FT on page 243 of the document "Science and Conservation of Vernal Pools in Northeastern North America," Calhoun and deMaynadier, 2008, which is referenced in Appendix E, page 3, Paragraph 10(b).

Corps Properties & Easements: Contact the Corps, Real Estate Division, (978) 318-8580 to initiate reviews about both Corps holdings and permit requirements.

Proactive Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former wetland or other aquatic resource (called re-establishment) or a degraded wetland or other aquatic resource (called rehabilitation). Restoration means the result of actions which, in the opinion of the Federal and state resource agencies, reinstates, or will reinstate, insofar as possible, the functions and values of a wetland or aquatic resource which has been altered. Restoration is the re-creation or rehabilitation of wetland or other aquatic resource ecosystems whose natural functions have been destroyed or impaired. The Corps will decide if a project qualifies as proactive restoration and must determine along with Federal & state agencies that the net effects would be no more than minimal.

Rivers of Concern: The following are rivers of concern due to either endangered species or cumulative impacts. There are no non-reporting bank stabilization activities in these rivers: Batten Kill River (to the headwaters), Black River (from its mouth in Springfield to its headwaters), Connecticut River, Lamoille River (from Hardwick to the confluence with Lake Champlain), Lewis Creek (from the Rte. 116 crossing to the confluence with Lake Champlain), Missisquoi River (from the International Boundary in Richford, VT to the confluence with Lake Champlain), Ompompanoosuc River (to the headwaters), Otter Creek (from Rutland to the confluence with Lake Champlain), North Branch of Ball Mountain Brook (from Pikes Falls to the headwaters), Poulmey River (to the headwaters), West River (from Jamaica to the confluence with the Connecticut River), White River (from Montpelier to Lake Champlain).

Minor deviations. Changes to the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Maintenance Dredging. Includes areas and depths previously authorized by the Corps and dredged. **New Dredging:** Includes dredging proposed in previously undredged areas and/or in areas exceeding previously authorized dimensions (deeper or wider than previously authorized) excluding normal overdrudge.

Boating Facilities: Facilities that provide, rent or sell mooring space, e.g., marinas, yacht clubs, boat yards, dockominiums.

Federal Navigation Projects (FNPs): FNPs are comprised of Federal channels and Federal anchorages. Contact the Corps for their location and information.

Horizontal Limits: The outer edge of an FNP. **Buffer zone:** Equal to three times the authorized depth of that channel.

Construction Mats: Construction, swamp and timber mats (herein referred to as "construction mats") are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they are installed temporarily or permanently.

Headwater and Ephemeral Streams: Forested upland and wetland clearing can lead to additional direct and indirect impacts to the headwater streams and ephemeral streams on individual sites. Headwater streams and wetlands provide a rich resource base that contributes to the productivity of both local food webs and those farther downstream. Land use changes in the vicinity of small streams and wetlands can impair the natural functions of headwater systems. These systems are vitally important to maintaining the quality and quantity of water and aquatic health of streams lower in the watershed.

¹⁸ **Maintenance:** a) In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design." Otherwise, the following work is regulated and subject to the Category 1 or 2 thresholds in Appendix A above: The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 - "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. b) Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized. c) Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. d) No seaward expansion for bulkheads or any other fill activity is considered Category 1 maintenance. e) Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2), or in accordance with the Category 1 or 2 thresholds in Appendix A. f) The state's maintenance provisions may differ from the Corps and may require reporting and written authorization from the state. g) Contact the Corps to determine whether stream crossing replacements require a written application to the Corps for at least a Category 2 review.

¹⁹ **Wild and Scenic River Designated Study Rivers:** The Missisquoi River, from its' headwaters in Lowell to the Canadian border in Troy (25 miles) and from the Canadian border in East Richford to Enosburg Falls (25 miles) and the Trout River have been officially designated by Congress as a study river.

²⁰ **Best Management Practices for Utility Construction Mats:**

Installation

- Mats should be in good condition to ensure proper installation, use and removal.
- Where feasible, mats should be carried and not dragged unless they are being used as a grading implement.
- Where feasible, place mats in a location that would minimize the amount needed for the wetlands crossing.
- Minimize impacts to wetland areas during installation, use, and removal.
- Install adequate erosion & sediment controls at approaches to mats to promote a smooth transition to, and minimize sediment tracking onto, swamp mats.
- In most cases, construction mats should be placed along the travel area so that the individual boards are resting perpendicular to the direction of traffic. No gaps should exist between mats. Place mats far enough on either side of the resource area to rest on firm ground.
- Provide standard construction mat BMP details to work crews.

Wetland/Stream Channel Crossing

- At "dry" crossings where no flow is present or anticipated during project construction, the mats may be placed directly onto the ground in order to prevent excessive rutting, provided stream banks & bottoms are not adversely altered.
- Construction mats may be used as a temporary bridge over a stream to allow vehicles access to the work site. Small sections of mat are placed within and along the stream parallel to the flow of water. Mats may then be placed perpendicular to the stream, resting on top of the initial construction mat supports. It may be necessary to place additional reinforcement for extra stability & to minimize the amount of sediment that could fall between the spaces of each timber.
- Mats should not be placed so that they restrict the natural flow of the stream.
- Minimize number of stream/wetland crossings. Where feasible, locate crossing site where stream channel is narrow for the shortest possible clear span & where stream banks are stable & well defined. For large wetland complexes, consider accessing structures from opposite sides where possible to avoid crossing the entire wetland.
- More than one layer of mats may be necessary in areas which are inundated or have deep organic wetland soils.

Maintenance

- Matted wetland crossings should be monitored to assure correct functioning of the mats. Inspect mats after use. Look for any defects or structural problems. Mats which become covered with soils or construction debris should be cleaned and the materials removed & disposed of in an upland location. The material should not be scraped & shoveled into the resource area. Mats which become imbedded must be reset or layered to prevent mud from covering them or water passing over them.

Removal

- Mats should be removed by "backing" out of the site, regrading immediately, taking care not to compact soils.
- Mats should be cleaned before transport to another wetland location to remove soil & any invasive plant species, seed stock or plant material.
- Cleaning methods may include but are not limited to shaking or dropping mats in a controlled manner with a piece of machinery to knock off attached soil & debris, spraying with water or air, & sweeping.
- Crossings should be inspected following mat removal to determine the level of restoration required.

Restoration

- Special precautions should be taken to promptly stabilize areas of disturbed soil located near wetlands & streams. Matted areas within wetlands will be allowed to naturally revegetate from existing root & seed stock of native plant species. If conditions warrant, wetland seed mix may be broadcast over the matted area to supplement the existing seed & rootstock. The use of mulch in wetlands shall consist of weed-free mulch to mitigate the risk of the spread of invasive plant species.

CC

CC

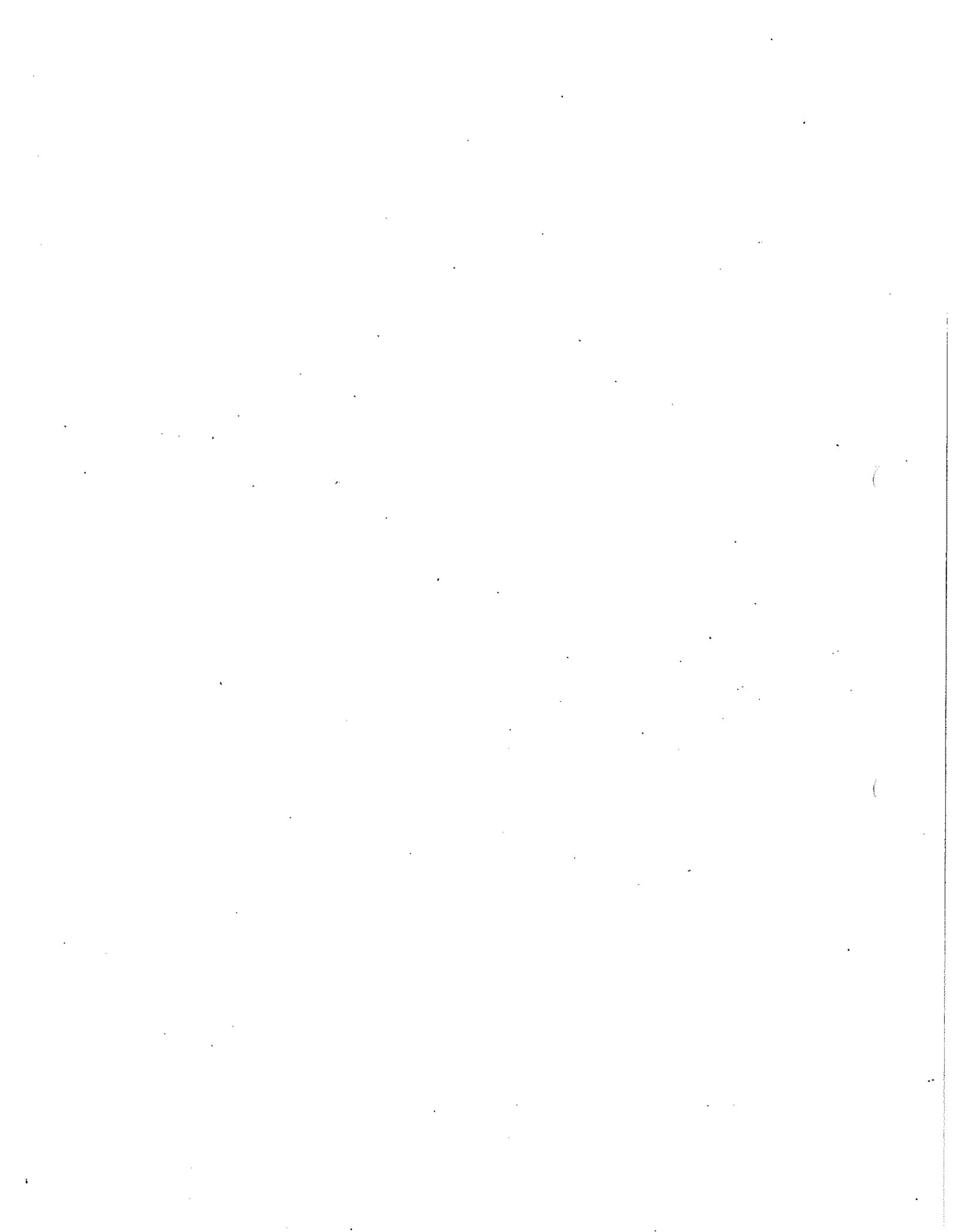
CERTIFICATION FOR FEDERAL-AID CONTRACTS

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

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person or influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

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



State of Vermont
Agency of Transportation
CONTRACTORS EEO CERTIFICATION FORM

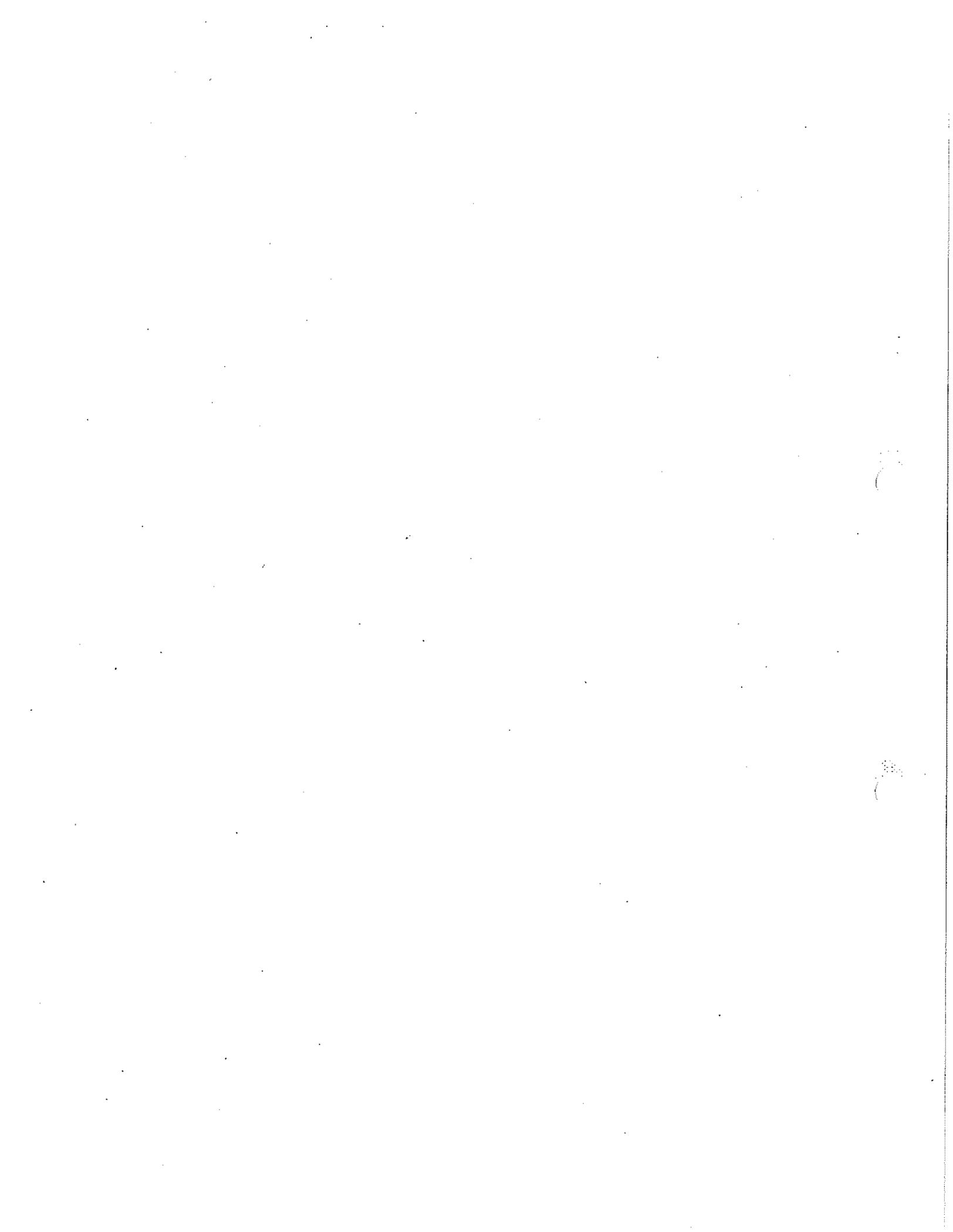
Certification with regard to the Performance of Previous Contracts of Subcontractors subject to the Equal Employment Opportunity Clause and the filing of Required Reports.

The bidder, hereby certifies that he/she has participated in a previous contract or subcontract subject to the equal opportunity clause as required by Executive Orders 10925, 11114, or 11246 as amended, and that he/she has, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the Presidents committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Miller Construction, Inc. Company	Roger C. Gilman By	President Title
--------------------------------------	-----------------------	--------------------

NOTE: The above certification is required by the Equal Employment Opportunity regulations of the Secretary of Labor(41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5 (Generally only contracts or subcontracts of \$10,000 or under are exempt.) Currently, Standard Form 100(EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration, or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.



CONSTRUCTION CONTRACT

1. Parties. This is a construction contract made this 19th day of March, 2014 between the State of Vermont, by its Agency of Transportation (hereafter called "State" or "Agency"), and Miller Construction, Incorporated of 3103 US 5 South, PO Box 86, Windsor, VT 05089, a corporation, incorporated under the laws of the State of Vermont, its successors and assigns, (hereafter called Contractor).

2. Subject Matter. The Contractor, in consideration of the payment or payments specified in this Contract and agreed to by State, hereby agrees to furnish all the materials and to perform all the work and labor in the improvement of a certain project in the Town of Brookfield, County of Orange, State of Vermont, being approximately 436.56 Feet in length, at the unit prices bid by Contractor for the respective estimated quantities, aggregating approximately the sum of Two Million Three Hundred Eighty Six Thousand Seventy Three Dollars and Fifteen Cents (\$2,386,073.15), and such other items, as are mentioned in the original Proposal. The original Proposal and prices named, together with the Standard Specifications for Construction ("Specifications") as are listed in the Schedule of Prices, are made a part of this Contract. Also, the drawings of the roadway prepared by the Agency, as verified by the Agency are made a part this Contract. The project is situated as follows:

Brookfield BRFLBR (2): THE BRIDGE IS LOCATED ON VT ROUTE 65 APPROXIMATELY 0.05 MILES SOUTHWEST OF THE INTERSECTION OF VT ROUTE 65 AND TH 1 IN BROOKFIELD'S SUNSET VILLAGE.

The construction consists of: REPLACEMENT OF THE EXISTING TIMBER FLOATING BRIDGE WITH A NEW FIBER REINFORCED POLYMER (FRP) FLOATING BRIDGE WITH TIMBER DECK AND RAILS, NEW ABUTMENTS, AND RELATED APPROACH WORK.

3. Labor and Material; Specifications. The Contractor shall perform all the work and labor in the best and most workmanlike manner. The materials and labor shall be in strict and entire conformity, in every respect, with the Specifications and drawings and shall be subject to the inspection and approval of the Agency. If any of the material or labor shall be rejected by the Agency as defective or unsuitable, then the Contractor shall remove and replace the defective or unsuitable materials with other approved materials and do the labor anew, to the satisfaction and approval of the Agency, at the cost and expense of the Contractor. The Standard Specifications for Construction, approved and adopted by the Agency in 2011 are incorporated herein, and made a part of this Contract.

4. Time for Performance; Liquidated Damages. The Contractor shall furnish the materials and perform the labor in every respect to the satisfaction and approval of the Agency, on or before May 22, 2015 after written notice has been given by the Engineer to begin work. In case of the failure on the part of the Contractor, for any reason, except as provided in this Contract, to complete the furnishing of the materials and performing the work on or before May 22, 2015 the State shall deduct from any moneys due or which may become due the Contractor, or if no moneys shall be due, the State shall have the right to recover the amount of liquidated damages as provided in the Specifications for each and every day elapsing between the time stipulated for the completion and the actual date of completion, in accordance with the terms of the Contract. Any such deductions or sums to be recovered are not penalties but liquidated damages. However, the Agency at its discretion, shall make allowance over the period specified for the completion of the work, for causes over which the Contractor has no control and which must delay the completion of the work, in such case, the Contractor shall become liable for liquidated damages for delays beginning from the date on which the extended period shall expire.

5. Extra Work or Materials; Claims. The Contractor understands and agrees that the Agency will not allow any claim for extra work or materials, not specifically provided in this Contract. The Contractor shall not do any work or furnish any materials not covered by these Specifications and Contract, unless such work is ordered in writing by the Agency. In no event shall the Contractor incur any liability by reason of any verbal directions or instructions that he may be given by the Agency. The State will not be liable for any materials furnished or used or for any work or labor done, unless the materials, work or labor are required of the Contractor on written order furnished by the Agency. Any such work or material which may be done or furnished by the Contractor without such written order first being given by the Agency shall be at the Contractor's own risk, cost and expense. The Contractor agrees that without such written order the Contractor shall make no claim for compensation for work or materials so done or furnished.

6. Assignment; Subcontracting. The Contractor shall not assign this Contract or any part of this Contract, or any right to any moneys to be paid the Contractor under this Contract, without the prior written approval of the Agency. The Contractor shall not subcontract any part of the work to be done or materials furnished under the Contract without the written approval of the Agency.

7. Acceptance of Final Payment; Release. The Contractor's acceptance of the final payment shall be considered as a release in full of all claims against the State of Vermont arising out of, or by reason of the work done and materials furnished under this Contract.

8. Bonds. The Bonds given by the Contractor, a Compliance Bond in a sum equal to one-hundred (100) per centum, and a Labor and Materials Bond in the sum equal to one-hundred (100) per centum of the total contract price of the work to be done, to secure a proper compliance with the terms and provisions of this Contract, are attached to and made a part of this Contract.

9. Dispute Resolution; Exclusivity of Administrative Remedies. All questions or disputes arising between the parties hereto respecting any matter pertaining to this Contract or any part of this Contract, or any breach of this Contract shall be referred to the Secretary of Transportation, whose decision and award shall be final, binding and conclusive upon all parties, subject to the right of appeal to the Transportation Board under 19 V.S.A. § 5(d) (4). All other rights or rights of action at law or in equity under and by virtue of this Contract and all matters connected with and relating to this Contract are hereby expressly waived.

10. Compensation for Contract Work. The Contractor agrees to receive the prices set forth in the following Schedule of Prices as full compensation for furnishing all the materials and labor which may be required in the prosecution and completion of the whole of the work to be done under this Contract and in all respects to complete this Contract to the satisfaction of the Agency.

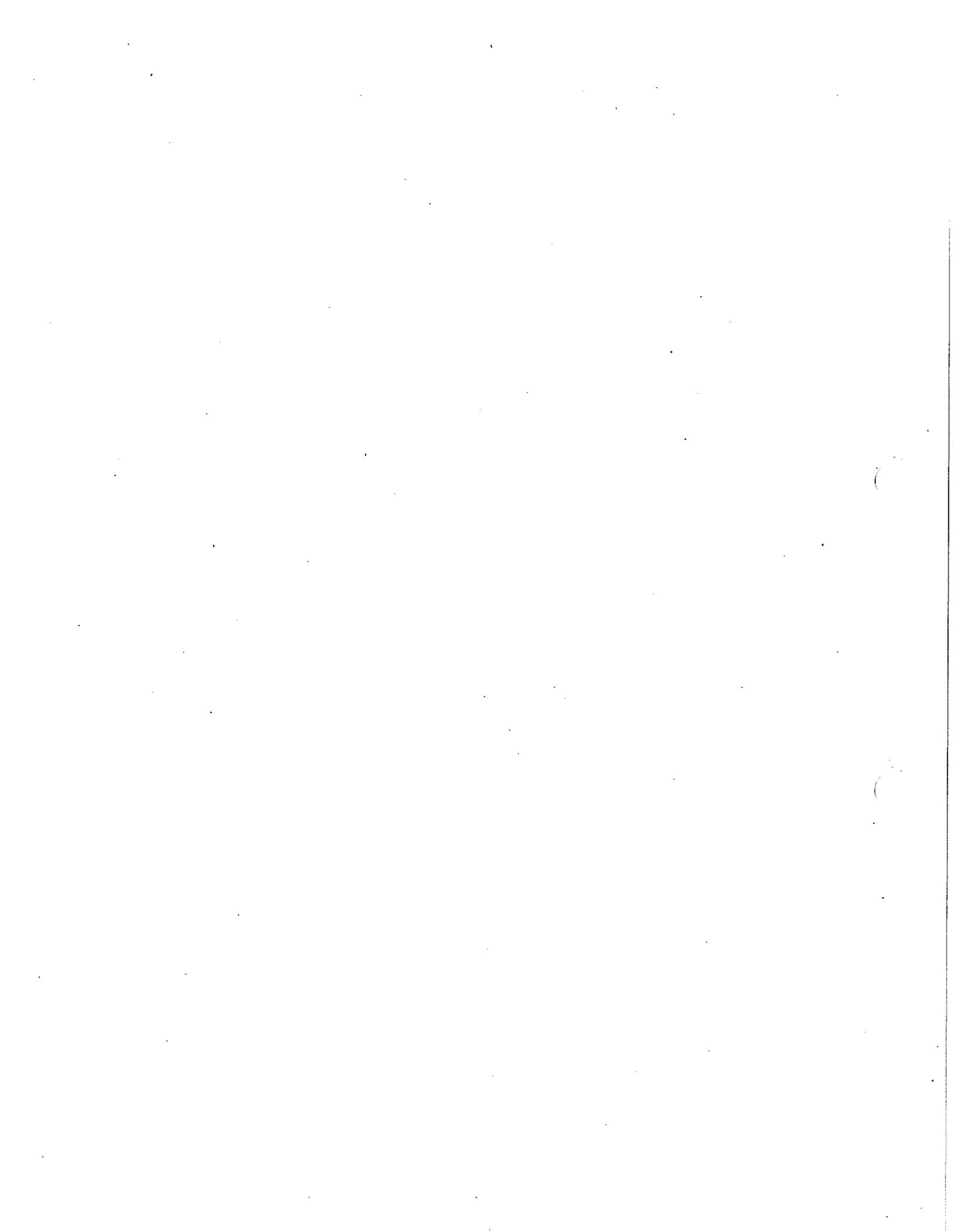
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BR F LBR (2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0005	203.15 COMMON EXCAVATION	525.000 CY	15.50000		8,137.50	
0010	203.27 UNCLASSIFIED CHANNEL EXCAVATION	20.000 CY	24.50000		490.00	
0015	204.22 TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A. B.I.)	1.000 CY	75.00000		75.00	
0020	204.30 GRANULAR BACKFILL FOR STRUCTURES	45.000 CY	60.00000		2,700.00	
0025	208.30 COFFERDAM EXCAVATION, EARTH	235.000 CY	24.50000		5,757.50	
0030	208.35 COFFERDAM EXCAVATION, ROCK	10.000 CY	225.00000		2,250.00	
0035	208.40 COFFERDAM (ABUTMENT NO. 1)	1.000 LS	46,000.00000		46,000.00	
0040	208.40 COFFERDAM (ABUTMENT NO. 2)	1.000 LS	65,000.00000		65,000.00	
0045	301.35 SUBBASE OF DENSE GRADED CRUSHED STONE	440.000 CY	43.00000		18,920.00	
0050	404.65 EMULSIFIED ASPHALT	1.500 CWT	65.00000		97.50	
0055	406.50 PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	1.000 LU	1.00000		1.00	



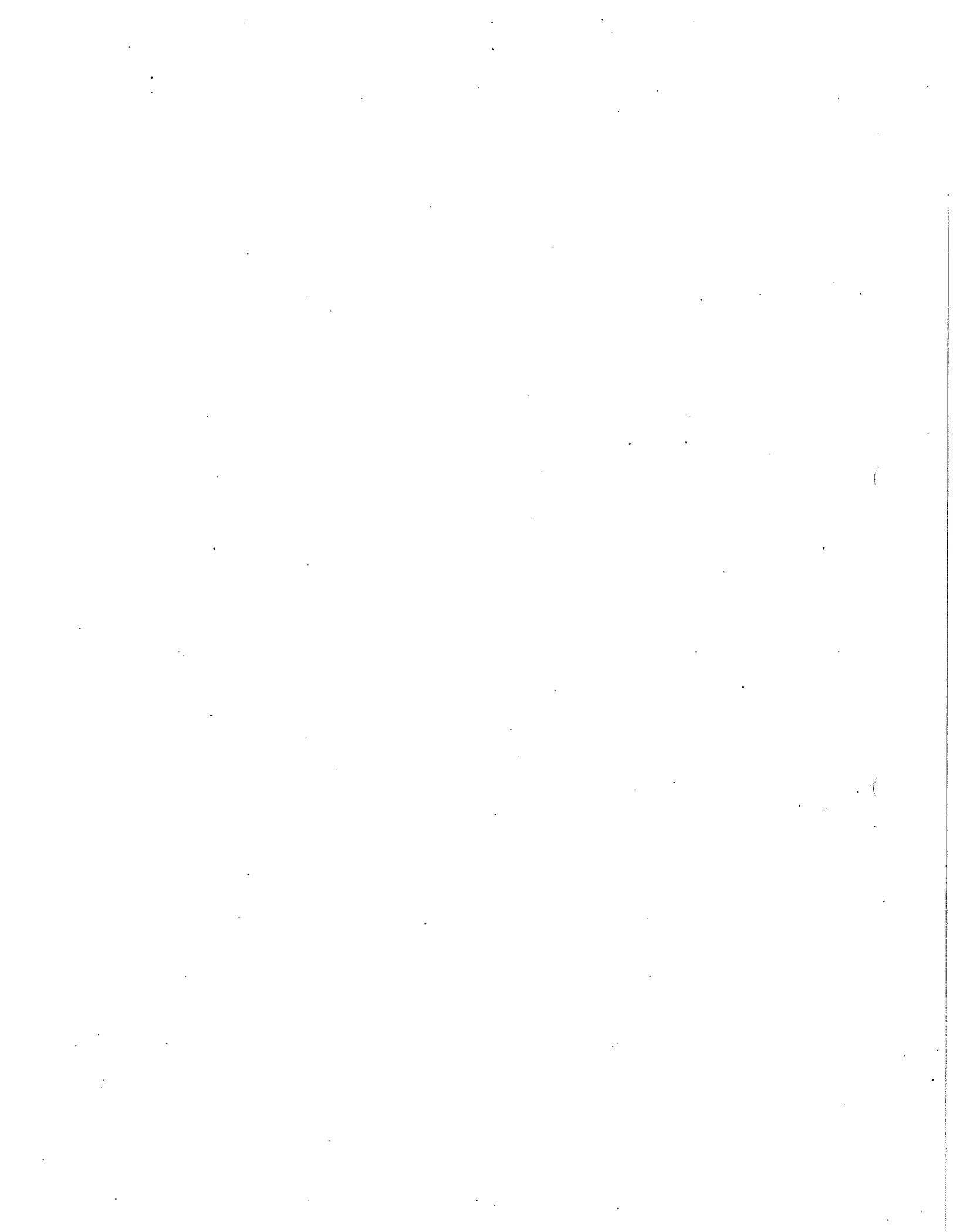
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BR F LBR (2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0005	203.15 COMMON EXCAVATION	525.000 CY	15.50000		8,137.50	
0010	203.27 UNCLASSIFIED CHANNEL EXCAVATION	20.000 CY	24.50000		490.00	
0015	204.22 TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A. B.I.)	1.000 CY	75.00000		75.00	
0020	204.30 GRANULAR BACKFILL FOR STRUCTURES	45.000 CY	60.00000		2,700.00	
0025	208.30 COFFERDAM EXCAVATION, EARTH	235.000 CY	24.50000		5,757.50	
0030	208.35 COFFERDAM EXCAVATION, ROCK	10.000 CY	225.00000		2,250.00	
0035	208.40 COFFERDAM (ABUTMENT NO. 1)	1.000 LS	46,000.00000		46,000.00	
0040	208.40 COFFERDAM (ABUTMENT NO. 2)	1.000 LS	65,000.00000		65,000.00	
0045	301.35 SUBBASE OF DENSE GRADED CRUSHED STONE	440.000 CY	43.00000		18,920.00	
0050	404.65 EMULSIFIED ASPHALT	1.500 CWT	65.00000		97.50	
0055	406.50 PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	1.000 LU	1.00000		1.00	



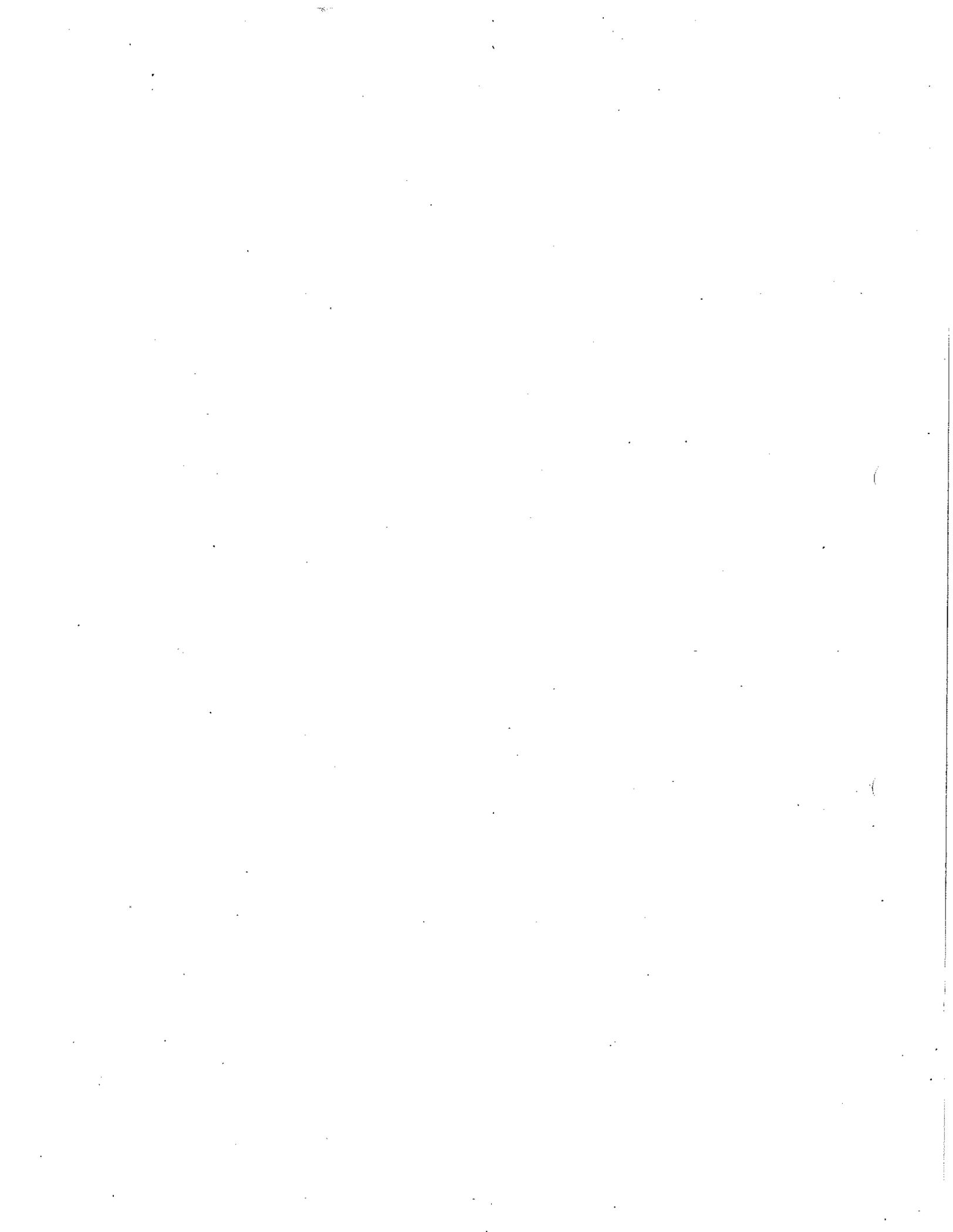
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BR F LBR (2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0060	501.34 CONCRETE, HIGH PERFORMANCE CLASS B	59.000 CY	650.00000		38,350.00	
0065	504.10 FURNISHING EQUIPMENT FOR DRIVING PILING	1.000 LS	25,000.00000		25,000.00	
0070	505.16 STEEL PILING, HP 12 X 74	410.000 LF	45.00000		18,450.00	
0075	505.45 DYNAMIC PILE LOADING TEST	2.000 EACH	2,000.00000		4,000.00	
0080	507.11 REINFORCING STEEL, LEVEL I	5,500.000 LB	1.50000		8,250.00	
0085	507.16 DRILLING AND GROUTING DOWELS	44.000 LF	31.00000		1,364.00	
0090	514.10 WATER REPELLENT, SILANE	3.500 GAL	68.00000		238.00	
0095	522.20 STRUCTURAL LUMBER AND TIMBER, UNTREATED	10.200 MFBM	4,825.00000		49,215.00	
0100	522.25 STRUCTURAL LUMBER AND TIMBER, TREATED	24.000 MFBM	6,750.00000		162,000.00	
0105	522.40 STRUCTURAL GLUED LAMINATED TIMBER (12.3 MFBM) (BEAMS AND DIAPHRAGMS)	1.000 LS	76,900.00000		76,900.00	
0110	529.15 REMOVAL OF STRUCTURE (6620 SF - EST.)	1.000 EACH	122,000.00000		122,000.00	



CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BR F LBR(2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0060	501.34 CONCRETE, HIGH PERFORMANCE CLASS B	59.000 CY	650.00000		38,350.00	
0065	504.10 FURNISHING EQUIPMENT FOR DRIVING PILING	1.000 LS	25,000.00000		25,000.00	
0070	505.16 STEEL PILING, HP 12 X 74	410.000 LF	45.00000		18,450.00	
0075	505.45 DYNAMIC PILE LOADING TEST	2.000 EACH	2,000.00000		4,000.00	
0080	507.11 REINFORCING STEEL, LEVEL I	5,500.000 LB	1.50000		8,250.00	
0085	507.16 DRILLING AND GROUTING DOWELS	44.000 LF	31.00000		1,364.00	
0090	514.10 WATER REPELLENT, SILANE	3.500 GAL	68.00000		238.00	
0095	522.20 STRUCTURAL LUMBER AND TIMBER, UNTREATED	10.200 MFBM	4,825.00000		49,215.00	
0100	522.25 STRUCTURAL LUMBER AND TIMBER, TREATED	24.000 MFBM	6,750.00000		162,000.00	
0105	522.40 STRUCTURAL GLUED LAMINATED TIMBER (12.3 MFBM) (BEAMS AND DIAPHRAGMS)	1.000 LS	76,900.00000		76,900.00	
0110	529.15 REMOVAL OF STRUCTURE (6620 SF - EST.)	1.000 EACH	122,000.00000		122,000.00	

72

73

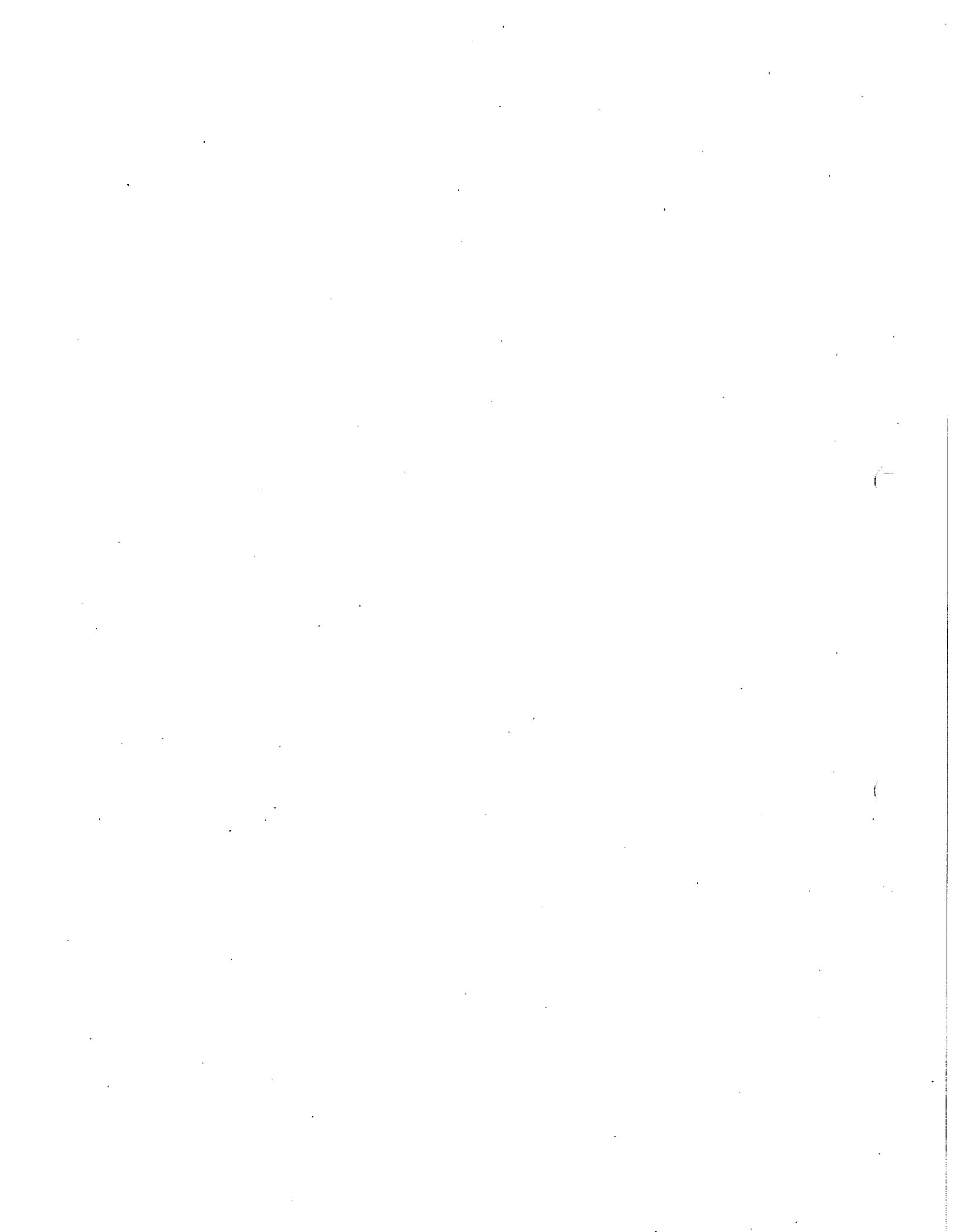
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BR F LBR (2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0115	541.30 CONCRETE, CLASS C	75.000 CY	330.00000		24,750.00	
0120	608.15 POWER GRADER RENTAL	20.000 HR	145.00000		2,900.00	
0125	608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I	20.000 HR	165.00000		3,300.00	
0130	608.37 TRUCK RENTAL	20.000 HR	80.00000		1,600.00	
0135	608.40 LOADER RENTAL, TYPE I	20.000 HR	105.00000		2,100.00	
0140	609.10 DUST CONTROL WITH WATER	25.000 MGAL	55.00000		1,375.00	
0145	613.10 STONE FILL, TYPE I	75.000 CY	52.00000		3,900.00	
0150	616.21 VERTICAL GRANITE CURB	53.000 LF	45.00000		2,385.00	
0155	618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	29.000 SY	66.00000		1,914.00	
0160	618.30 DETECTABLE WARNING SURFACE	40.000 SF	54.00000		2,160.00	
0165	621.18 STEEL BACKED TIMBER GUARDRAIL	214.000 LF	135.00000		28,890.00	



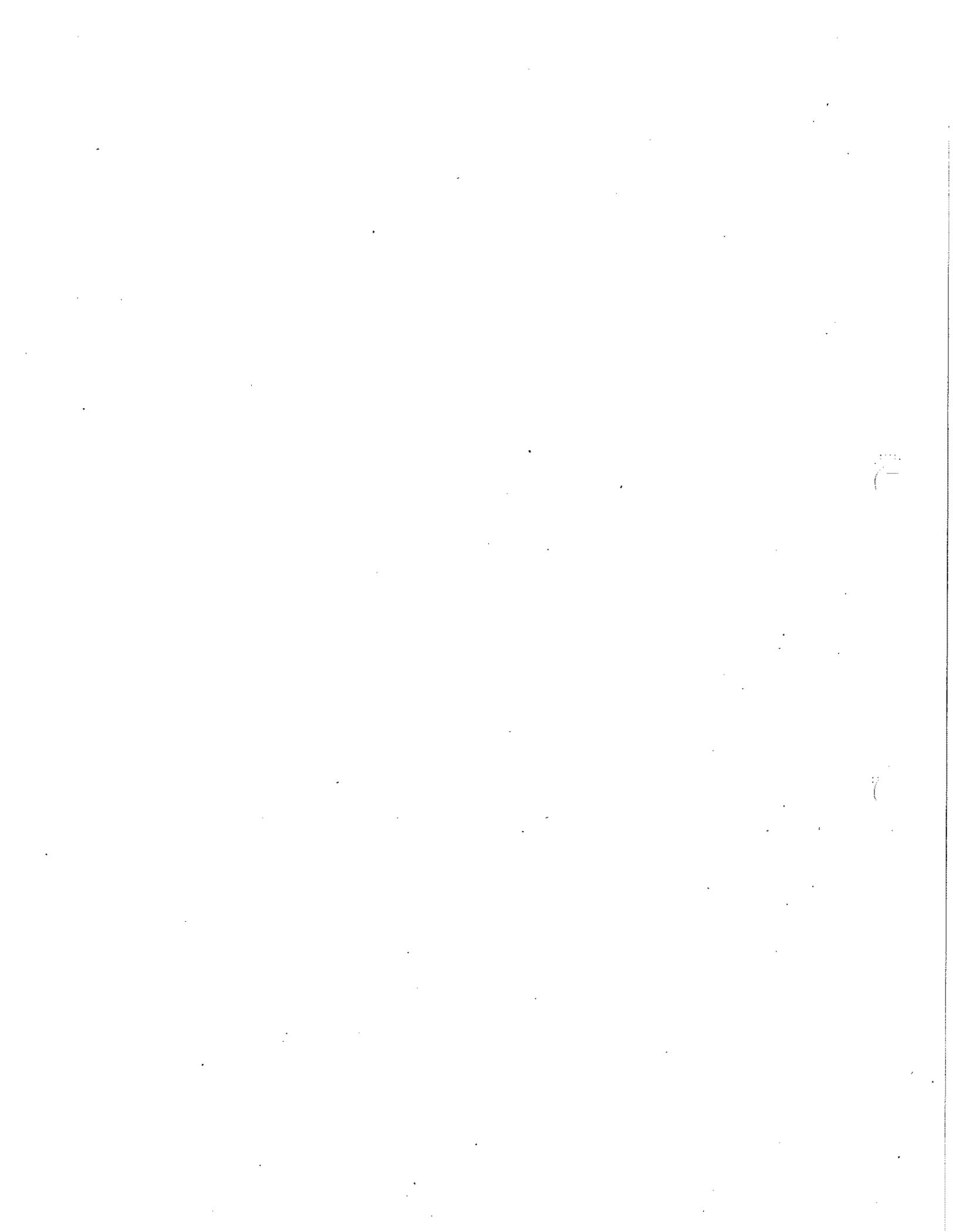
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BRG FLBR(2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0170	621.80 REMOVAL AND DISPOSAL OF GUARDRAIL	210.000 LF	5.00000		1,050.00	
0175	630.10 UNIFORMED TRAFFIC OFFICERS	40.000 HR	70.00000		2,800.00	
0180	630.15 FLAGGERS	200.000 HR	24.00000		4,800.00	
0185	631.10 FIELD OFFICE, ENGINEERS	1.000 LS	15,000.00000		15,000.00	
0190	631.16 TESTING EQUIPMENT, CONCRETE	1.000 LS	1,000.00000		1,000.00	
0195	631.17 TESTING EQUIPMENT, BITUMINOUS	1.000 LS	1,000.00000		1,000.00	
0200	631.26 FIELD OFFICE TELEPHONE (N.A.B.I.)	3,000.000 DL	1.00000		3,000.00	
0205	634.10 EMPLOYEE TRAINEESHIP	520.000 HR	5.00000		2,600.00	
0210	635.11 MOBILIZATION/DEMOBILIZATION	1.000 LS	157,888.00000		157,888.00	
0215	641.10 TRAFFIC CONTROL	1.000 LS	7,500.00000		7,500.00	
0220	646.21 4 INCH YELLOW LINE	143.000 LF	3.25000		464.75	



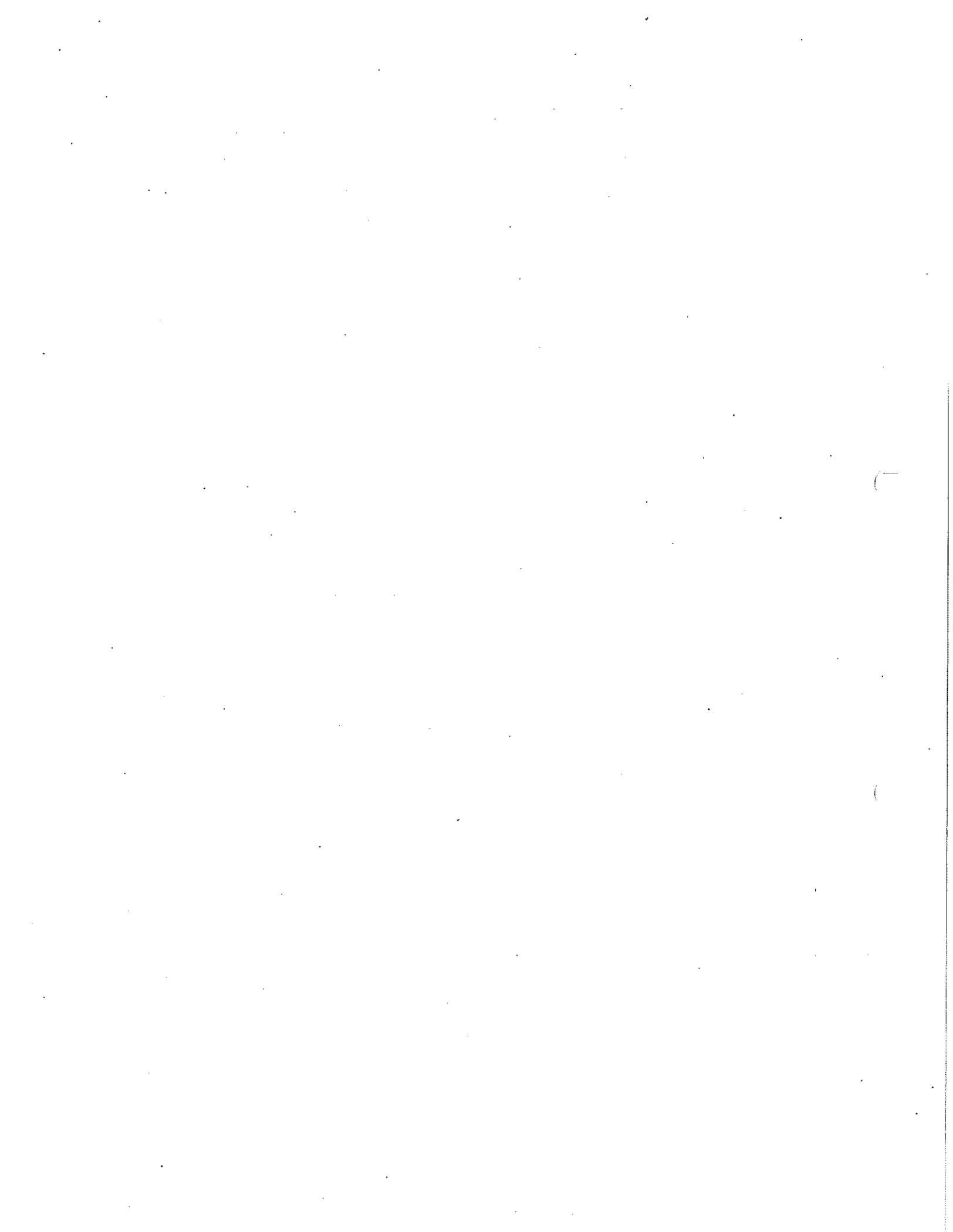
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BRP FLBR(2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0225	646.30 LETTER OR SYMBOL	EACH 12.000	55.00000		660.00	
0230	649.11 GEOTEXTILE FOR ROADBED SEPARATOR	SY 360.000	2.75000		990.00	
0235	649.31 GEOTEXTILE UNDER STONE FILL	SY 190.000	5.00000		950.00	
0240	649.51 GEOTEXTILE FOR SILT FENCE	SY 75.000	6.50000		487.50	
0245	649.61 GEOTEXTILE FOR FILTER CURTAIN	SY 290.000	24.00000		6,960.00	
0250	651.15 SEED	LB 3.000	20.00000		60.00	
0255	651.17 SEED, WINTER RYE	LB 1.000	20.00000		20.00	
0260	651.18 FERTILIZER	LB 20.000	7.50000		150.00	
0265	651.20 AGRICULTURAL LIMESTONE	TON 0.100	900.00000		90.00	
0270	651.25 HAY MULCH	TON 0.100	900.00000		90.00	
0275	651.35 TOPSOIL	CY 20.000	60.00000		1,200.00	



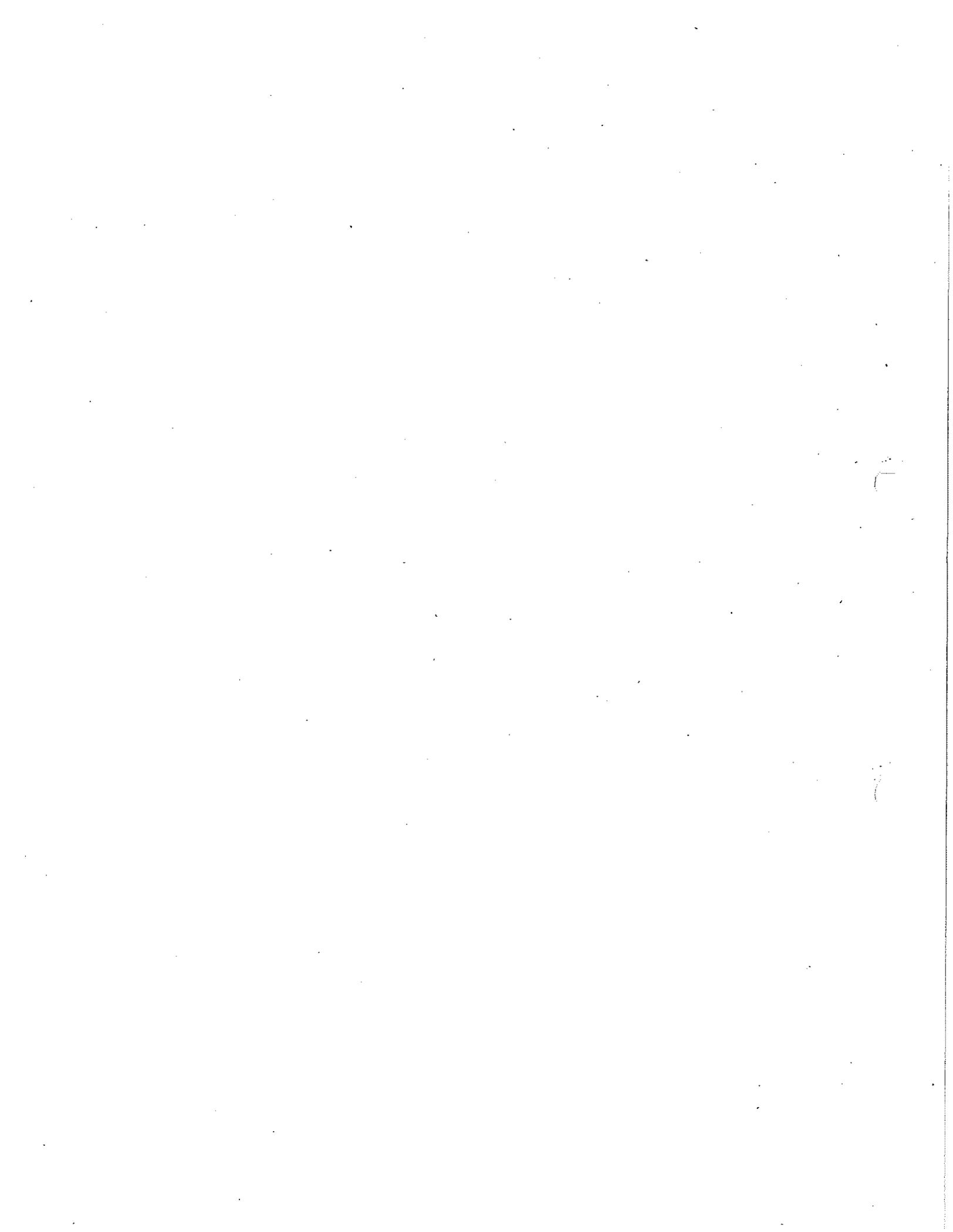
CONTRACT SCHEDULE

REVISED:

CONTRACT ID: 12E134

PROJECT(S) : BROOKFIELD BR F LBR(2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0280	652.10 EPSC PLAN	1.000 LS	2,200.00000		2,200.00	
0285	652.20 MONITORING EPSC PLAN	70.000 HR	55.00000		3,850.00	
0290	652.30 MAINTENANCE OF EPSC PLAN (N.A.B.I.)	1.000 LU	8,000.00000		8,000.00	
0295	653.45 FILTER BAG	2.000 EACH	585.00000		1,170.00	
0300	653.55 PROJECT DEMARCATION FENCE	260.000 LF	1.35000		351.00	
0305	675.20 TRAFFIC SIGNS, TYPE A	55.600 SF	14.00000		778.40	
0310	675.341 SQUARE TUBE SIGN POST AND ANCHOR	112.200 LF	10.00000		1,122.00	
0315	675.50 REMOVING SIGNS	12.000 EACH	5.00000		60.00	
0320	900.608 SPECIAL PROVISION (AGGREGATE SURFACE COURSE, SIDEWALK/TRAIL)	10.000 CY	50.00000		500.00	
0325	900.620 SPECIAL PROVISION (BEARING DEVICE ASSEMBLY, FLOATING BRIDGE)	32.000 EACH	2,085.00000		66,720.00	
0330	900.620 SPECIAL PROVISION (GRANITE BOLLARD)	4.000 EACH	875.00000		3,500.00	



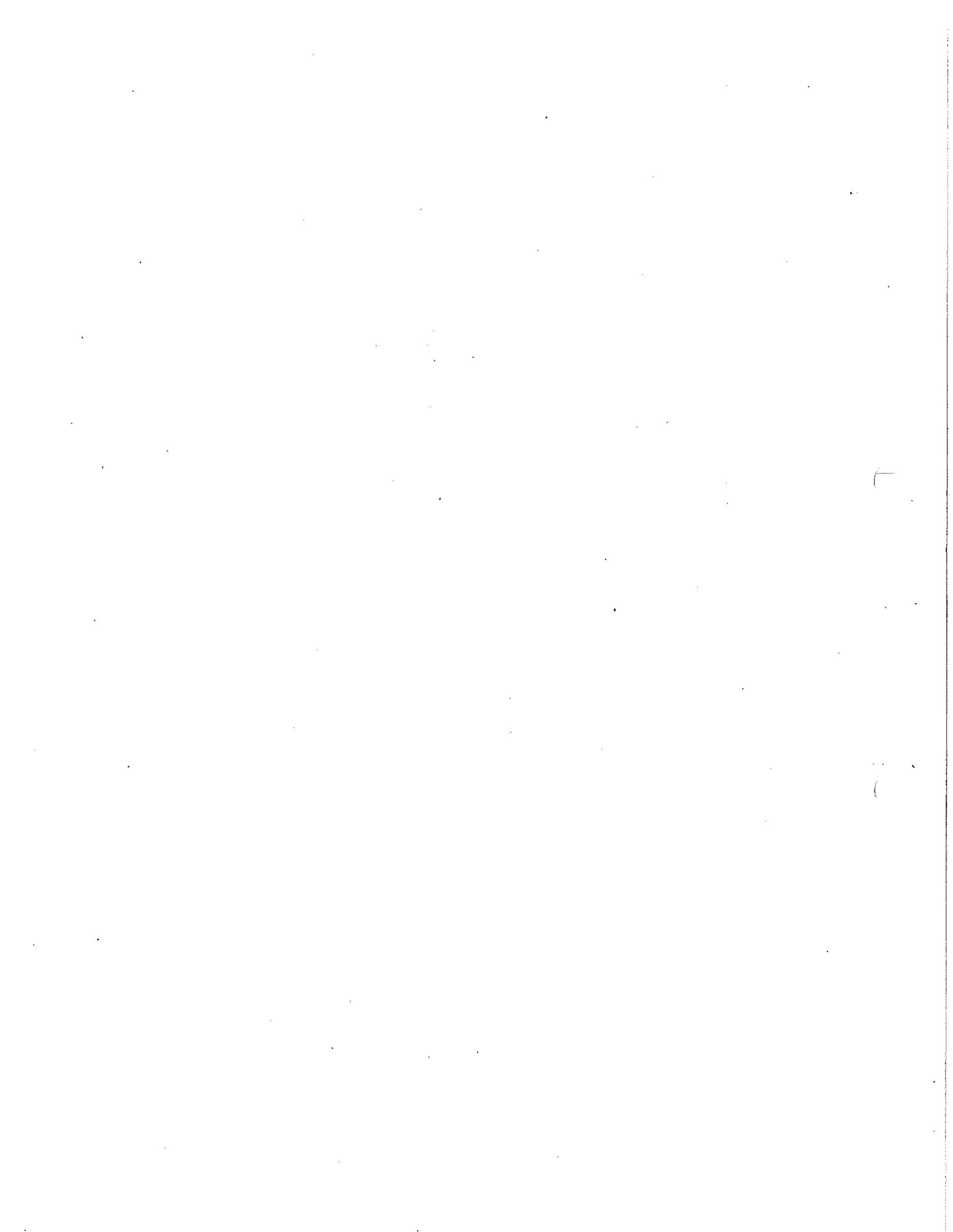
CONTRACT SCHEDULE

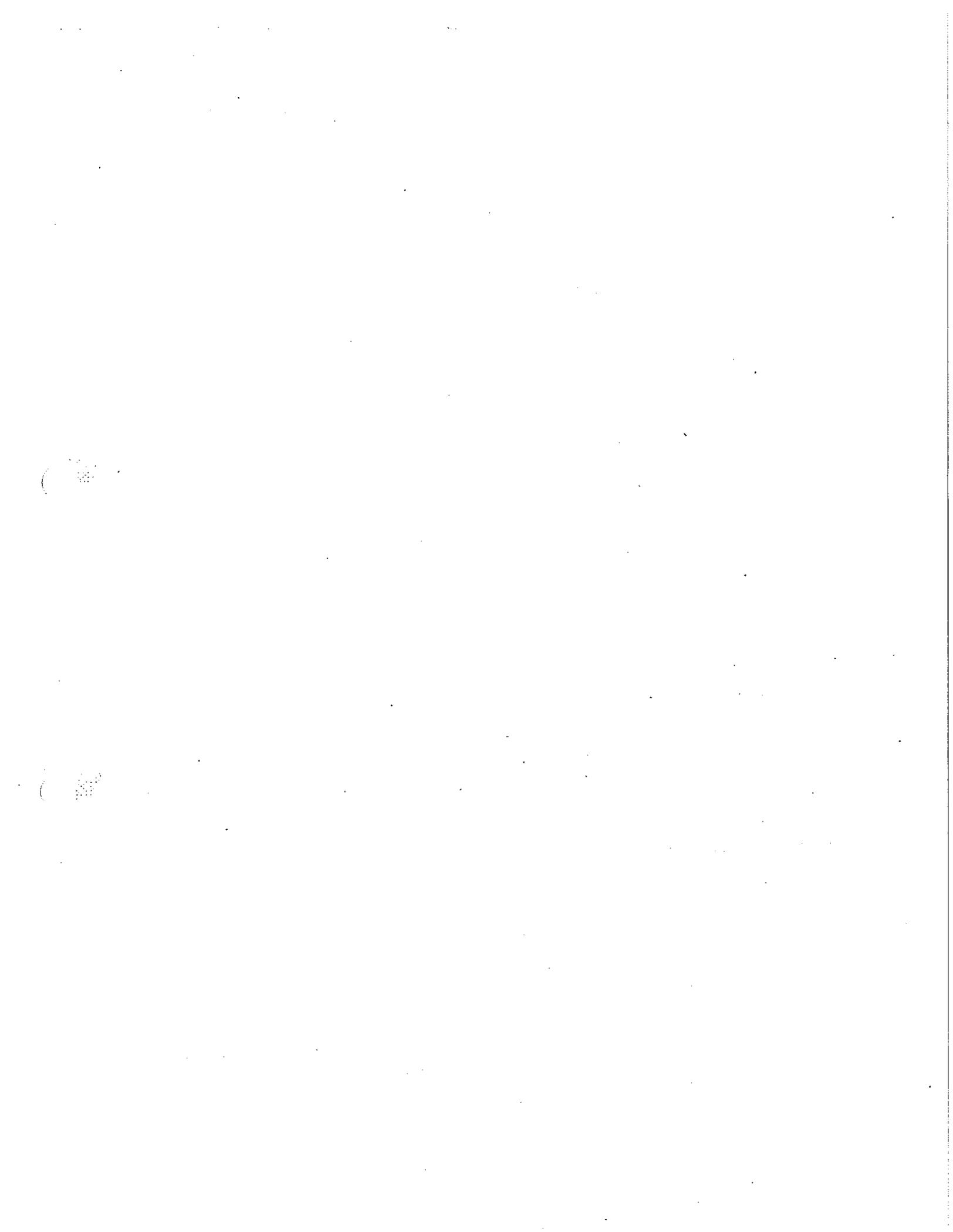
REVISED:

CONTRACT ID: 12E134

PROJECT(S): BROOKFIELD BRP FLBR(2)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0335	900.620 SPECIAL PROVISION (STAINLESS STEEL SHELF)	2.000 EACH	17,500.00000		35,000.00	
0340	900.620 SPECIAL PROVISION (WINTER TRAFFIC BARRIER)	2.000 EACH	800.00000		1,600.00	
0345	900.640 SPECIAL PROVISION (EXPANSION DEVICE, HINGED SLIDING PLATE ASSEMBLY)	93.000 LF	1,150.00000		106,950.00	
0350	900.645 SPECIAL PROVISION (FIBER REINFORCED POLYMER PONTOONS)	1.000 LS	923,500.00000		923,500.00	
0355	900.650 SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	1.000 LU	1.00000		1.00	
0360	900.650 SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N. A.B.I.)	1.000 LU	1.00000		1.00	
0365	900.670 SPECIAL PROVISION (NAIL LAMINATED TIMBER DECK PANEL)	7,320.000 SF	37.00000		270,840.00	
0370	900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	115.000 TON	180.00000		20,700.00	
TOTAL BID						2,386,073.15





Project Name & Number: Brookfield BRF FLBR (2)

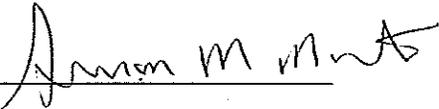
EMPLOYER IDENTIFICATION NUMBER

03-0213275

WE THE UNDERSIGNED PARTIES AGREE TO BE BOUND BY THIS CONTRACT

By the State of Vermont:

Date: 3/19/14

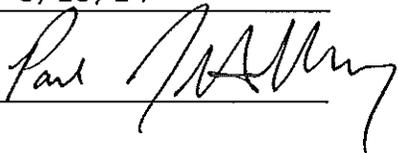
Signature: 

Name: Brian R. Searles/Susan M. Minter

Agency: Transportation

By the Contractor:

Date: 3/13/14

Signature: 

Name: Paul Holloway

Title: Vice President