

Town of Westminster, VT: Pine Banks Road Box Culvert
Request for Construction Bids (RFB)
14' wide x 7' height x 100' length Box Culvert

PROPOSAL OF _____ (hereinafter called
 “BIDDER”), organized and existing under the laws of the State of _____,
 doing business as _____.

The Town of Westminster, VT is accepting bids from contractors to replace a culvert on Pine Banks Road located 0.5 miles south of Piggery Road. The project includes replacement of the existing structure with associated channel improvements and rip rap. BIDDER hereby proposes to perform all work for the installation of a new box culvert on Pine Banks Road in accordance with the attached Scope of Work/Description of Pay Items’ General Construction Notes and Requirements for the prices stated in the following Bid Tabulation.

BID TABULATION

Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization/demobilization	1	LS		
2	Construction Sign Package	1	LS		
3	Traffic Control Plan	1	LS		
4	Tree removal/stumping	1	LS		
5	Remove Existing guard rail	1	LS		
6	Erosion Control (allowance)	1	ALL	\$3,000	\$3,000
7	Excavation	1	LS		
8	Removal of Existing pipe	1	LS		
9	Temporary drainage pipe	1	LS		
10	Concrete footings for box/wingwalls	1	LS		
11	Cast in place support at lower cutoff	1	LS		
12	14' x 7' x 100' Box w/ headwalls	1	LS		
13	8' wingwall	1	EA		
14	10' wingwalls	3	EA		
15	Type E3 Stone fill at outlet	14	CY		
16	Build stone rip rap wall from WW 3	1	EA		
17	Backfill and compact	1	LS		
18	Earth Borrow	500	CY		
19	Place/compact 18" coarse dense grade	300	CY		
20	Place/compact 6" fine gravel	100	CY		
21	Road Grading	1	LS		
22	Sloping	1	LS		
23	Type 3 rip-rap	40	CY		
24	Seeding/mulching	1	LS		
25	Jute Matting	900	SY		
26	Guard Rails with 6' posts	70.5	LF		
27	Guard Rails with 8' posts	250	LF		
28	Guard Rail Anchors	4	EA		

29	Misc. cleanup	1	LS		
30	Boulders	30	CY		
31	Ledge Removal	30	CY		
32	Bid, Payment & Performance Bond	1	LS		
TOTAL					\$

NOTE: Refer to the attached description of items for further detail of pay items.

LS=Lump Sum, LF=Linear Foot, EA=Each, SF=Square Foot, SY=Square Yard, CY=Cubic Yard, LU=Lump Unit, TONS= English tons, ALL=Allowance, NI = Not Included

NOTE 1: Final payments will be based on the actual work completed per the bid tabulation.

NOTE 2: Pages 1-3 of this Bid/Bid Bond/Insurance due by 2:00 PM on March 12, 2024 at the Westminster Town Hall, Attn: Town Manager (Lou Bordeaux). Envelopes are to be clearly labeled “Pine Banks Road Box Culvert”. The bids will be opened at 2:00pm at the Town Hall. Bids may also be mailed to:

Town of Westminster, VT
3651 U.S. Route 5
Westminster, VT 05158

NOTE 3: A mandatory pre-bid meeting will be held on site at 1:00 PM on Tuesday, Feb. 27, 2024.

Wednesday, Feb 28, 2024 at 1:00pm will be a backup snow date. Contractors will be notified by email on 2/27/2024 by 11am in the event the snow date will be used.

NOTE 4: Bids will be reviewed at the March 13, 2024 selectboard meeting.

BIDDER hereby agrees to complete the work under the contract between July 1, 2024 and October 1, 2024. A start date of June 1st will be allowed if approved by the State of Vermont. In the event the work is not completed by October 1, 2024, BIDDER agrees to pay as liquidated damages, the sum of five hundred (\$500.00) dollars for each consecutive calendar day until work is complete unless a time extension is granted by the State of Vermont and Town of Westminster, VT.

By submission of the Bid, BIDDER certifies that bid has been arrived at independently, without consultation, commitment or agreement as to any matter relating to Bid with any other BIDDER or with any competition.

Contractors shall furnish all supervision, technical personnel, labor, materials, tools, appurtenances, equipment, traffic control, erosion control, and services required to replace the existing culvert as shown on three plan sheets entitled: “PINE BANKS ROAD CULVERT” by Hammond Engineering, 2/12/24.

The plans are intended for construction by a Contractor with prior bridge/pre-cast culvert replacement experience. The Chosen Contractor shall list prior pre-cast culvert experience and may be required to provide references. The Chosen Contractor may be required to demonstrate that he or she consistently performs work using the highest quality of workmanship. The Chosen Contractor may be required to demonstrate that he or she owns or has access to the equipment required to perform this work.

The contract, if awarded, will be awarded to the least costly, best qualified and most responsible proposer. In determining the “least costly, best qualified and most responsible proposer,” in addition to price, the following may be considered:

- The substantial performance of the proposer in meeting the specifications and other terms and conditions of the solicitation;
- The ability, capacity and skill of the proposer to provide the services required, and to do so within the time specified;
- The character, integrity, reputation, experience, financial resources and performance of the proposer under previous contracts with the municipality and elsewhere.

The Town reserves the right:

- (1) to accept or reject any or all Bids in whole or in part and to accept other than the lowest price proposal;
- (2) to amend, modify, or withdraw this Request for Bids;

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- (3) to require supplemental statements or information from bidders;
- (4) to extend the deadline for responses to this Request for Bids;
- (5) to waive or correct any irregularities in Bids received;
- (6) to negotiate separately with one or more competing bidders; and
- (7) to award the bid deemed in the best interest of the Town. All bids, upon submission, become the property of the Town.

GENERAL CONSTRUCTION NOTES

- All material to be installed in accordance with manufacturer’s specifications and instructions.
- The State of Vermont specifications shall be adhered to, a summary of some of the pertinent ones are attached as **Additional Specifications**. Any reference to “Agency” or TOWN shall imply the Town of Windham, VT.
- Notify Digsafe at least 72 hours prior to construction.
- It shall be the contractor’s responsibility to comply with OSHA and VOSHA requirements, maintain a safe job site, and protect the safety of the public.
- Contractor will stake out the ends of the proposed culvert with 10’ and 20’ offset stakes.

BOND REQUIREMENTS

The Chosen Contractor will be required to furnish a Performance Bond and a Payment Bond each in the amount of 100% of the contract price. Upon receipt of these bonds, the Town will issue a Purchase Order or Agreement to the Chosen Contractor. The Purchase Order shall require the Chosen Contractor to warranty their work to be free from defects in material and workmanship for a period of one year from substantial completion.

INSURANCE REQUIREMENTS

1. WORKERS’ COMPENSATION: The CONTRACTOR is required to carry full and complete Workers’ Compensation insurance for all employees engaged in work on this project. The same requirements for Workers’ Compensation insurance shall apply to any subcontractor engaged on this project. The Chosen Contractor shall, prior to a Purchase Order being issued, produce a certificate of insurance demonstrating same to the Town. The Chosen Contractor shall keep said insurance, and the Town’s additional insured status, in full force throughout the course of the project. This Certificate of Insurance will need to be provided at the time bids are submitted.
2. GENERAL LIABILITY INSURANCE: The Chosen Contractor shall supply the Town with a Certificate of Insurance showing liability coverage no less than \$1,000,000. The Chosen Contractor shall cause the Town to be made an additional insured on the Chosen Contractor’s liability insurance, on a primary and non-contributing basis. The Chosen Contractor shall, prior to a Purchase Order being issued, produce a certificate of insurance demonstrating same to the Town. The Chosen Contractor shall keep said insurance, and the Town’s additional insured status, in full force throughout the course of the project. A Certificate of Insurance will need to be provided at the time bids are submitted.

(Signature of Bidder & Date)

(Title of Bidder)

(Contractor)

(Street/P.O. Box)

(Town, State, Zip)

(Phone # / fax#)

Competent Contract Supervisor: _____ years exp. _____

Contractor shall list below the successful completion of similar projects:

1. _____
2. _____
3. _____

Bid Submittal: Only submit Pages 1-3 by the due time/date. Late bids will not be accepted.

ADDITIONAL CONTRACTOR REQUIREMENTS

The contractor must have the financial resources to obtain materials/equipment and supplies to complete the project and the necessary experience, organization, technical and professional qualifications, skills, equipment and facilities.

The Chosen Contractor shall provide Traffic Control Plan acceptable to the Town Engineer, including any required barricades, signs, and labor. All signs shall conform to MUTCD standards.

The Chosen Contractor shall be responsible for verifying and determining all utilities (above and below ground) within the project limits, and to take necessary precautions to protect utilities during construction. Any discrepancies or Contractor questions shall be brought to the Town Engineer's attention before the start of construction.

All work performed by the Chosen Contractor shall comply with all federal, state, and local regulations and requirements. The Chosen Contractor shall review and understand all applicable environmental permits and ensure that all construction conditions are met. The Chosen Contractor shall provide erosion control.

Shop drawings and design calculations for all pre-cast products stamped by a professional engineer licensed in the State of Vermont shall be submitted for review and approval by the Town's Engineer prior to fabrication. Shop drawings shall include all reinforcement, connection details, etc. for all pre-cast products (box culvert and wing walls). Pre-cast structures made by contractors will need to be accompanied by an inspection report by a structural engineer licensed in the State of Vermont.

The omission from the plans and/or specifications of express reference to any labor or materials reasonably to be inferred there from and necessary for the proper execution of the work shall not relieve the Chosen Contractor from furnishing them of a kind in keeping with the general intent of the work. No responsibility is assumed by the Town Engineer or the Town for omissions or duplications by the Chosen Contractor or his subcontractors due to real or alleged error in arrangement of matter in specifications or in notes on the drawings.

The Town Engineer shall decide all questions which may arise as to the quality, quantity, acceptability, fitness and rate of progress of the several kinds of work and materials to be performed and furnished under the contract, and shall decide all questions which may arise as to fulfillment of the contract on the part of the contractor. The Town Engineer's determination and decision shall be final and conclusive as to any and all issues which may arise under the contract.

The Chosen Contractor shall be solely responsible for repairing or paying to repair any damage to private or public property sustained during and as a result of construction activities to original condition.

ADDENDUMS: Questions about this Request for Bids shall be directed by email solely to the Engineer - Everett Hammond through email at hammondeng@gmail.com. Addendum #1 if necessary, will be emailed out by the engineer by February 29, 2024 . The last day for contractor questions shall be March 4, 2024 at midnight; Addendum #2 if necessary, will be emailed out by the engineer by March 5, 2024.

Attachments to this Request for Bids: 5 plan sheets by Hammond Engineering, Request for Construction Proposal, Stream Alteration General Permit (submitted).

Scope of Work/Description of pay Items

Item#	Description of work
1	Mobilization/Demobilization: This line item is inclusive of insurances and is subsidiary to the contract.
2	Construction Sign Package: The contractor shall install road closure signs and detour signs. All other signs for complete road closures or partial road closures shall be installed by the contractor and conform to the MUTCD Standards.
3	Traffic Control Plan: A traffic control plan shall be submitted to the Town prior to the start of the project. Signs for complete closure shall be installed by the contractor and conform to MUTCD Standards. Additional information can be found in the 2009 edition of the MUTCD Manual (pages 649-651). http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part6.pdf .
4	Tree removal: The trees to be removed as part of this line item will be removed by the contractor. The wood shall be offered to the existing landowner first, then adjoining landowners before any disposal of the wood. Wood shall then be dropped off to the landowner in their designated location in log lengths not exceeding 12'. The removal of trees must not occur during the bat habitat season determined by the Vermont ANR or Corp of Engineers. Any stumping required for the installation of the box culvert, wing walls or temporary pipe will be paid as part of this line item.
5	Remove Existing guard rail: The Contractor will remove the existing guard rail at the start of construction and deliver to the Town of Westminster Highway garage located on Town Garage Road.
6	Erosion Control (allowance): An allowance has been carried in each bidders pay item for this work. Payments will be made on time and expense based on the installation of silt fences, pump bags and stone check dams as required to maintain a clean site. Contractor shall excavate the site in a manner that it can handle a heavy rain event that may overtop the temporary pipe. Example: The roll out of Mirafi 700X (or equal) keyed in at the inlet and sides will prevent or minimize erosion of the site.
7	Excavation: This project will involve a substantial amount of excavation and storage of material just to get down to the proposed box culvert. This line item is for the excavation and storage of existing material.
8	Removal of Existing pipe: It shall be the responsibility of the contractor to remove and properly dispose of the existing drainage pipe.
9	Temporary drainage pipe: The temporary culvert shall be a minimum size of 42" diameter and have at least 1' of head buildup over the top of the pipe inlet. The contractor may use a larger size to reduce flooding risks. This piping shall be removed by the contractor after the new drainage structure is prepared to accept the stream. The hydraulic study has been attached for use by the contractor.
10	Concrete footings for box/wingwalls: This shall consist of excavation, sloping or shoring as necessary, dewatering and placement of the concrete footings for the precast 4-sided box culvert and wingwalls. The concrete footings shall be precast State of Vermont Class B concrete with 5% air and 4" maximum slump. Waste Concrete blocks shall not be used.
11	Cast in place support at lower cutoff wall: A 16' wide x 12' long x 18" average concrete thickness shall be cast in place just below the outfall of the lower cutoff wall. This shall be poured on a minimum of 12" compacted course dense graded crushed stone. Concrete forms will not be utilized and the finish surface shall be rough raked perpendicular to the flow of the stream. The contractor shall plan on 10 CY of Class B concrete poured with 5% air and a 5" maximum slump.
12	14' x 7' x 100' Box w/ headwalls: This work will include all work associated with the installation of the new precast 4-sided box culvert. The culvert shall be designed for the controlling HL-93 loading (with 25' of cover) as defined in the LRFD Specifications, certified by a Vermont Professional Structural Engineer and approved by the Towns Engineer. The precast box culvert shall be supplied by the contractor and include: <ul style="list-style-type: none"> • Shop Drawing submittals of the box shall be submitted to the Engineer for approval prior to casting the box.

- Excavation
- Shoring or sloping
- Dewatering
- Bedding under the culvert: 12” of Coarse Dense Grade (or equal) capped with 2” +/- of course surepak (or equal) fine graded to within ¼” or less. Stone may only be used in lieu of Coarse Dense Grade with the engineers permission, providing a cutoff dam is installed near the inlet and outlet of the box to prevent a conduit of water in the stone bedding.
- Precast Concrete Box Culvert - the inlet of the box may be manufactured to be either plumb or battered back at the slope of the box. The outlet of the box shall be manufactured plumb.
- 18” tall headwalls, 12” width
- Installation per the details on the drawings
- Coordination with overhead utilities
- Crane for placement
- External hardware tying the precast sections together (2 per joint) shall be left in place on the structure
- Concrete Weirs: A 12” high x 12” wide precast concrete weir shall be installed at the inlet, outlet and at the outlet end of each precast section. The weir shall be tapered down to 0.5’ at the center of the box. Natural backfill material found from the site shall be placed at a depth of 24” of each section. Backfill material shall be Type E3 Stone Fill in the following sizes: The longest dimension of stone shall be at least 36”; and at least 50-% of the volume shall be at least 24”; and at least 25% shall have a maximum dimension of 2” and well graded.
- Stream bed stone fill placement of material as specified on the profile
- Granular backfill and compaction to 95% standard proctor. Granular backfill (VTRANS Specification 704.08A) shall be installed a minimum of 4’ from the outside of the box. The granular backfill gravel quantities for this are included in this line item. Contractor shall submit gravel samples a minimum of 7 days prior to anticipated use. The Town will have these samples tested at the town’s expense. Should the contractor submit a sample that fails the expense of the replacement sample shall be at the Contractors expense.
- All joints shall be mortared inside and out. The mortar on the outside of the box shall be smooth to avoid damaging the joint cover material.
- The holes for the lift hooks shall be sprayed with expanding foam prior to backfill
- The top and sides of the box culvert joints shall be covered with 2 layers of road stabilization fabric (Mirafi 700X or equal).
- 6” underdrain shall be installed from the outlet wingwall a distance of 95’ along each side of the box, stopping short of the inlet wing wall.

All gravel and backfill materials to within 2’ of the road surface shall be supplied by the CONTRACTOR.

Pre-cast structures made by contractors will need to be certified by a current licensed structural engineer that it meets all design and construction standards of the current VTRANS standards and specifications. The pre-cast structures made by contractors will also need to be accompanied by an inspection report by a structural engineer licensed in the State of Vermont.

13	<p>8’ wingwall: Contractor shall excavate and provide the concrete footings, wingwall and compaction to 95% standard proctor. Wingwalls shall be designed by a structural engineer. Geogrid shall be installed as part of the wall if required by the wall manufactures recommendation. Wingwalls shall have a minimum of 8” concrete walls. Each wing will shall have 2- 4” x ¾” SS 304 anchors into the box and 2- 4” x ¾” SS 304 anchors into the concrete footing. The vertical joints of the wingwalls shall have a gap no greater than ¼” with 2 layers of road stabilization fabric installed prior to backfill. Each wingwall shall have waste blocks placed firmly against the back of the wall to reduce soil pressure on the wall. These blocks shall not be visible after the backfilling has been completed. Crushed stone and granular backfill (704.08A) shall be installed behind the wingwall a minimum distance of 4’. An 8” weep hole shall be installed at the lower inside edge of the downstream</p>
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	wingwalls. A 6" underdrain shall be installed draining the back of each downstream wingwall.
14	10' wingwalls: Contractor shall excavate and provide the concrete footings, wingwall and compaction to 95% standard proctor. Wingwalls shall be designed by a structural engineer. Geogrid shall be installed as part of the wall if required by the wall manufactures recommendation. Wingwalls shall have a minimum of 8" concrete walls. Each wing will shall have 2- 4" x 3/4" SS 304 anchors into the box and 2- 4" x 3/4" SS 304 anchors into the concrete footing. The vertical joints of the wingwalls shall have a gap no greater than 1/4" with 2 layers of road stabilization fabric installed prior to backfill. Each wingwall shall have waste blocks placed firmly against the back of the wall to reduce soil pressure on the wall. These blocks shall not be visible after the backfilling has been completed. Crushed stone and granular backfill (704.08A) shall be installed behind the wingwall a minimum distance of 4'. An 8" weep hole shall be installed at the lower inside edge of the downstream wingwalls. A 6" underdrain shall be installed draining the back of each downstream wingwall.
15	Type E3 Stone Fill: This is for stone fill needed on the outlet of the proposed box culvert. The stone fill inside the box culvert is included with the box culvert line item.
16	Build stone rip rap wall from WW 3: Larger supporting rock shall be placed 2' below the edge of the stream. The wall shall have a batter sloping away from the stream at 1' vertical to 0.5' horizontal. Prior to construction of the wall, the contractor shall verify with the engineer on the batter. The joints of the stones shall be tight and shall have a minimum of 3 points of contact with the stone layer below and on either side. Stones/rip rap shall not be pushed in from the front of the wall. The backfill shall be with course gravel/stone a distance of 4' behind the face of the wall and compacted to 95% Standard Proctor.
17	Backfill & compact: Material stockpiled shall be brought back to the site to be used as common backfill from a distance of 4' over the top/4' from the sides of the box to within 2' of finish gravel road surface.
18	Earth Borrow: Earth borrow meeting VTRANS Specifications 70-3.02 will be purchased and trucked in by the contractor in the event borrow is needed to balance the site. This shall only be used with the approval of the engineer after all suitable material from the site excavation has been utilized.
19	Place and compact 18" Dense Graded Crushed stone: Base crushed gravel shall be placed in all locations where the road is excavated. The gravel shall be compacted to 95% standard proctor. Gravel shall meet the State of Vermont Specifications 704.06A. Contractor shall submit gravel samples a minimum of 7 days prior to anticipated use. The Town shall test the samples at the Towns expense. Should the contractor submit a sample that fails the expense of the replacement sample shall be at the Contractors expense. Gravel shall be paid by the Cubic Yards compacted in place. Measurements: 160' along road x 30' width x 1.5' depth/27 = 266 CY (USE 300 CY) TOTAL: 300 CY
20	Place and compact 6" fine gravel: The final crushed gravel surface shall have 6" of compacted crushed gravel in locations where the road is excavated. The gravel shall be compacted to 95% standard proctor. Gravel shall meet the State of Vermont Specifications 704.05B. Contractor shall submit gravel samples a minimum of 7 days prior to anticipated use. The Town will test the samples at the Towns expense. Should the contractor submit a sample that fails the expense of the replacement sample shall be at the Contractors expense. Gravel shall be paid by the Cubic Yards compacted in place. The finish gravel grades shall be based on the pre-existing centerline grade. Measurements: 150' along road x 28' width x 1.5' depth/27 = 78 CY (USE 100 CY) TOTAL: 100 CY
21	Road Grading: The final grades shall be based on the existing center line grades of the existing road, sloped away at a 4% grade. The gravel surface shall be rough graded to within 2" of finish gravel grade. If necessary, the TOWN will smooth the surface with their grader prior to the installation of the guard rails.
22	Sloping: Sloping shall include cut and fill slopes on the project. Slopes shall be stabilized with

	ditching material in remote areas and topsoil in lawn areas prior to seeding and mulching.
23	Type 3 rip-rap: Rip-Rap shall be supplied and installed at the inlet, outlet ends of the box and along the toe of the stream as shown on the plan.
24	Seeding/mulching: Conservation mix shall be applied in all areas including over the rip rap slope. The conservation mix shall be covered with mulch, with the exception of the rip rap.
25	Jute Matting: All newly finished ground surface shall be covered and staked with biodegradable jute matting after the completing of the seed/mulch.
26	Guard Rails w/6' posts: Steel Beam Guard Rail with 6' posts shall be installed on the sections of guard rail with adequate backing or if a large rock is struck with an 8' post. Refer to VTRANS Detail Sheet G-1D for details.
27	Guard Rails w/8' posts: Steel Beam Guard Rail with 8' posts shall be installed on the sections of guard rail on each side of the box culvert. Refer to VTRANS Detail Sheet G-1D for details.
28	Guard Rail Anchors: Anchors shall be installed as part of this project. Refer to VTRANS Detail Sheet G-1D for details.
29	Misc. cleanup: Cleanup of construction debris throughout the project.
30	Boulders: A boulder is defined as any rock larger than 1 CY. An estimate of 30 CY has been used. Boulders removed during excavation may be used on the project if approved by the engineer.
31	Ledge Removal: Should ledge be encountered in the excavation area for the box culvert it shall be removed by hammering with a hydraulic hammer or drilling/blasting. Any ledge removed will be measured prior to removal and paid for by the Cubic Yard. The pay limit for ledge removal shall be from the top of ledge to 1' below the bottom of the box and/or footings and 4' wider than the outside edge of the box/footing. An estimate of 30 CY has been used. Ledge removed from this project may be used on the project if approved by the engineer.
32	Bid, Payment & Performance Bond: A bid bond and certificate of insurance will be required at the time the bid is submitted. The contractor must submit a Payment & Performance Bond equal to 100% of the contract price with a corporate surety approved by the Town within 7 days after the NOTICE of AWARD is issued to the CONTRACTOR.
33	Left Blank:

ADDITIONAL SPECIFICATIONS: SECTION 100

103.04 INSURANCE REQUIREMENTS. Insurance obtained by the Contractor to cover the below-listed requirements shall be procured from an insurance company registered and licensed to do business in the State of Vermont. All insurance coverage for property damage shall provide coverage for "Replacement" cost. Before the Contract is signed and becomes effective, the Contractor shall file with the Agency a certificate of insurance, in duplicate, executed by an insurance company or its licensed agent(s), on a form satisfactory to the Agency, stating that with respect to the Contract awarded, the Contractor carries insurance in accordance with the following requirements. Renewal certificates for keeping the required insurance in force for the duration of the Contract shall also be filed as specified above.

No warranty is made that the coverage's and limits listed herein are adequate to cover and protect the interests of the Contractor and any subcontractor for the Contractor's and any subcontractor's operations. These are solely minimums that have been established to protect the interests of the State.

(a) Workers Compensation Insurance. With respect to all operations performed the Contractor shall carry Workers Compensation Insurance in accordance with the laws of the State of Vermont, 21 V.S.A. Chapter 9. The Contractor shall also ensure that all subcontractors carry Workers Compensation Insurance in accordance with 21 V.S.A. Chapter 9 for all work performed by them.

(b) Commercial General Liability Insurance. With respect to all operations performed by the Contractor and subcontractors, the Contractor shall carry Commercial General Liability Insurance on an occurrence form providing all major divisions of coverage, including but not limited to:

- Premises - Operations
- Independent Contractor's Protective
- Products and Completed Operations
- Personal Injury Liability

Property Damage
Collapse and Underground (CU) Coverage

Limits of coverage shall not be less than:
\$1,000,000 Each Occurrence
\$1,000,000 General Aggregate applying, in total, to this project only
\$1,000,000 Products/Completed Operations Aggregate

The Contractor and/or subcontractors shall also carry Automobile Liability Insurance covering all motor vehicles.

SECTION 104 - SCOPE OF WORK

104.01 INTENT OF CONTRACT. The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the Plans, Specifications, and other provisions of the Contract.

104.02 ALTERATION OF PLANS OR CHARACTER OF WORK. To suit conditions disclosed as the work progresses, the Engineer may, make alterations in the design, in type of materials, in the quantities or character of the work or materials required, in the cross-sections, in dimensions of structures, in length of project, in locations, and any other ways deemed appropriate. Alterations will not constitute a change in other parts of the Contract or a waiver of any condition of the Contract, and shall not invalidate any of the provisions of the Contract Documents. Payment for work occasioned by changes or alterations will be made according to a change order. If the altered or added work is of sufficient magnitude to require additional time in which to complete the project, a time adjustment will be made.

104.03 EXTRA WORK. The Contractor shall perform extra or unforeseen work for which there is no quantity and price included in the Contract according to the Contract or as directed by the Engineer whenever it is deemed necessary or desirable by the Engineer in order to complete the work as contemplated; payment will be made through a change order.

SECTION 105 - CONTROL OF THE WORK

105.01 AUTHORITY OF THE ENGINEER.

(a) General. The Engineer shall decide all questions which arise concerning the quality and acceptability of materials furnished the manner of performance of the work, the rate of progress of the work, and compliance with the requirements of the Contract; the Engineer shall decide all questions concerning interpretation of the Contract.

(b) Quantities; Orders; Disputes; Rejection of Materials, Work; Suspension of Work. The Engineer shall determine the amount and quantity of the work performed and materials furnished that are to be paid for under the Contract. The Engineer shall have authority to enforce and make effective decisions and orders the Contractor fails to carry out promptly. In case of any dispute arising between the Contractor and the Engineer as to materials furnished or the manner of performing the work, the Engineer has the authority to reject the materials and/or to suspend the work until the dispute is decided. The Engineer is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract Documents. The Engineer has authority to suspend the work or withhold payment of all estimates due the Contractor when necessary to secure proper compliance with the Contract.

(c) Performance of Work by Engineer; If the Contractor fails to perform work ordered by the Engineer, the Engineer may, upon written notice, proceed to perform the work as deemed necessary; the cost of the work will be deducted from any monies due or which may become due the Contractor under the Contract.

(d) Advice by Engineer. Advice given the Contractor by the Engineer shall not be construed as binding the Agency in any way, or releasing the Contractor from any obligations under the Contract.

105.03 PLANS AND WORKING DRAWINGS. A complete description of the work requires both the Plans, which are furnished to the Contractor by the Agency, and Working Drawings, which are submitted to the Agency by the Contractor or the Contractor's suppliers. The Plans and Working Drawings will be provided as follows:

(a) Contract Plans. The Engineer will furnish Plans, consisting of general drawings and details that are necessary to give a comprehensive description of the construction contemplated. The Plans will show general features of all structures, alignment, grades and typical cross-section. The Engineer will furnish the Contractor three copies of half scale plans. Additional sets or partial sets requested by the Contractor or a subcontractor, Fabricator, or supplier will be furnished at cost. The Contractor shall keep one set of complete Plans available on the project at all times.

(b) Working Drawings.

(1) General. Certain items and construction activities require plans, drawings, procedures, and other information to document the Contractor's proposed actions to conform with Contract requirements. Drawings and procedures shall be submitted sufficiently in advance of the anticipated work to allow for review(s), comment(s), and correction(s). The cost of

furnishing Working Drawings, including obtaining any necessary design or field measurements, shall be included in the Contract unit price for the item involved. When a Contract item requires calculations to be submitted, the calculations shall be included with the submittal of the Working Drawings. Manufacturer's engineering data for prefabricated materials, including that for falsework and forms, shall be submitted with each set of Working Drawings.

105.06 COOPERATION BY CONTRACTOR.

The Contractor shall:

(a) Plans and Specifications. Have available on the project at all times during the prosecution of the work one copy each of the Plans and Specifications;

(b) Competent Contractor Superintendent. Have on the project at all times a competent and reliable English-speaking Superintendent authorized to receive orders and to act for the Contractor. The Contractor shall make every effort to provide continuity in the position of Superintendent. However, the TOWN reserves the right to refuse or terminate the assignment of any Superintendent on the project.

(c) Competent Safety Officer. Have available on the project at all times during the prosecution of the work a competent and reliable English-speaking employee designated as the safety officer; this person shall be authorized to receive orders and issue binding directions concerning safety to all persons associated with the project who are employed by the Contractor, subcontractors or material suppliers. This individual shall be well versed in OSHA and VOSHA regulations, shall be capable of implementing a plan to conform to these regulations, and shall have the authority to stop construction operations on the project.

(d) Emergency Contacts. Furnish to the Engineer a list of addresses and telephone numbers of the Contractor's personnel who can be reached in an emergency. The Contractor shall alert certain personnel to stand by and shall inform the Engineer of any arrangements.

(e) Facilities; Information; Assistance; Samples; Control Points. Provide all reasonable facilities and furnish the information, assistance, and samples required by the Engineer or Inspector to properly inspect and test materials and quality of work; and cooperate in setting and preserving stakes, bench marks, and other control points used in laying out the work.

(f) Foul Language: The contractor shall refrain from the use of foul language while working on this project, particularly when in earshot of the local residents.

105.07 COOPERATION WITH UTILITIES.

(a) General. The TOWN will notify all utility companies, pipeline owners, and other known parties affected and endeavor to have all necessary adjustments of the public or private utility fixtures, pipelines, and other appurtenances within or adjacent to the limits of construction made as soon as practical.

(b) Moving Utility Property; Owner's Expense. Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction which are to be relocated or adjusted are to be moved by the owners at their expense, unless otherwise provided in the Contract. Contractor shall coordinate proposed work with the utility companies.

(c) Utility Interference; No Claim for Delays. The Contractor acknowledges and understands that, at the time of bid submission, it has considered all of the permanent and temporary utility facilities or appurtenances in their present and/or relocated positions as shown on the Plans and evident at the site. Notwithstanding any other provision of law, case law, regulation, or the Contract, no additional compensation will be allowed for any delays, inconvenience or damage sustained by the Contractor due to any interference from utilities, utility companies, utility facilities, appurtenances, or the operation of moving them.

(d) Utility Relocation for Contractor's Convenience. Should the Contractor desire temporary changes of location of any utility facilities or appurtenances for convenience in performing the work, the Contractor shall satisfy the TOWN that the proposed relocation does not interfere with its own or other contractors' operations or the requirements of the work and does not cause an obstruction or a hazard to traffic. The Contractor shall be responsible for requesting such relocation work of a utility and/or other affected parties. Such relocation work shall be made solely at the Contractor's expense.

105.09 CONSTRUCTION STAKES.

(a) The Contractor will be responsible for setting sufficient points to establish the initial alignment and elevation of the proposed work; this shall include centerline offset stakes marked with centerline finish grades, offsets for establishing

working points for any structures on the project, critical horizontal control points, and an adequate number of benchmarks for establishing vertical control. The Contractor shall check the proposed grades; any mistakes or errors identified shall be brought immediately to the attention of the Engineer, and adjustments will be made by the Engineer.

(b) Layout of Subgrade. Prior to fine-grading the subgrade for the box culvert, the Contractor will recheck the offset stakes from which the Contractor shall set control. Any mistakes or errors identified shall be brought immediately to the attention of the Engineer, and adjustments will be made by the Engineer.

105.10 AUTHORITY AND DUTIES OF ENGINEER

As the direct representative of the TOWN, the ENGINEER on a project has immediate charge of the engineering details of the project; is responsible for the administration and satisfactory completion of the project(s); has the authority to reject defective material, to suspend any work that is being improperly performed, and to withhold payment until defective work has been corrected. The Engineer has the authority to suspend work, or specific aspects of the work, if necessary to address a concern for safety of the workers or traveling public, or a serious environmental concern or violation. Notwithstanding any other provision of law, case law, regulation, or the Contract, no additional compensation shall be provided for any work suspensions of this sort.

104.07 FINAL CLEANING UP FOLLOWING COMPLETION OF PROJECT.

(a) Cleanup of Project. Upon completion of the work, before acceptance, and before final payment will be made, the Contractor shall satisfactorily and completely clean and remove from the right-of-way and grounds occupied by the Contractor in connection with the work all equipment, falsework, surplus and discarded materials, rubbish, temporary structures, buildings, tools, lumber, refuse, and other unsightly material.

(b) Restoration of Property. The Contractor shall restore in an acceptable manner satisfactory to the Engineer all property, both public or private, which has been damaged during the prosecution of the work; replace or renew any fences damaged; leave the waterways unobstructed; and leave the construction area in a neat and presentable condition throughout the entire length of the work.

(c) Drainage Structures and Ditches. The removal and disposal of silt, debris, and other material from drainage structures and ditches, whether deposited prior to or during construction under the Contract, shall be accomplished prior to acceptance of the project as ordered by the Engineer.

(d) Closure of Material Supply and Disposal Areas. Material supply areas shall be cleaned up to its original condition.

(e) Costs. Costs involved with final cleanup following completion of the project will either be paid for under specific pay items or be incidental to all other Contract items.

107.11 USE OF EXPLOSIVES.

General: The Contractor shall use the utmost care to protect life and property and, whenever directed by the Engineer, shall reduce the number and size of explosive charges. Blasting mats shall be used when required by regulation or deemed necessary. The Contractor shall notify each person, company, corporation, or public utility that owns, leases, or occupies property or structures near the site of the work of plans to use explosives; notice shall be given sufficiently in advance to enable people to take such steps to protect their property or structure from injury as they may deem necessary. Provision of notice shall not relieve the Contractor of responsibility for any damage resulting from the Contractor's blasting operations. All persons within the danger zone of blasting operations shall be warned, a warning whistle shall be sounded, and the zone cleared just prior to blasting. A sufficient number of flaggers shall be stationed outside the danger zone to stop all approaching traffic during blasting operations. Explosives shall be used only during daylight hours and shall be handled only by competent, trained workers; particular care shall be taken to ensure that no unexploded charges remain in the work area unattended and when constructions operations cease for the day. All explosives shall be stored securely, all storage locations shall be clearly marked "DANGEROUS-EXPLOSIVES," and all storage locations shall be supervised and controlled by a competent, trained person at all times. All explosives and highly flammable materials shall be stored and used in strict conformity with all Federal, State, and local laws, rules, and regulations. Attention is directed to VOSHA *Safety and Health Standards for Construction*, Subpart U, Blasting and the Use of Explosives.

Insurance: The Contractor acknowledges full responsibility and assumes full liability for any and all damage or injury to persons or property caused either directly or indirectly by the Contractor's or a subcontractor's use of explosives. The liability of the Contractor shall apply equally to damages or injury to persons or property whether said injury or damage occurs within or outside of the right-of-way. The cost of all precautionary measures shall not be paid for directly, but all costs therefore shall be included in the bid prices for the pay items under the Contract.

Warning Signs; Costs Incidental: Prior to blasting operations the Contractor shall install warning signs in conformance with the MUTCD. Warning signs shall be located in prominent positions at least 370 m (1200 feet) from the point of blasting and visible to any person approaching the blasting point. Payment for furnishing, erecting and maintaining warning signs shall be considered incidental to other items in the Contract.

Documentation of Structure Condition: It shall be the responsibility of the Contractor to document the existing condition of all structures that have potential for damage. This documentation shall be in the form of a video or pictures, with sufficient description, and shall be supplied to the Engineer prior to any blasting on the project. The costs of preparing this documentation will not be paid for directly, but shall be considered incidental to all Contract items.

Blast Surveys: The Contractor shall monitor all blasts and provide a report to the Engineer that shall indicate the Peak Particle Velocity (PPV) of the blast. The PPV sensitivity as reported shall range from less than 0.5 mm/s (0.02 in/s) to more than 125 mm/s (5.0 in/s). The Engineer reserves the right to request more than one instrument to monitor the blasting if there is a need for monitoring in more than one direction from the blasting area. The costs of the monitoring and preparing the reports will not be paid for directly, but shall be considered incidental to all Contract items.

107.18 CONTRACTOR'S RESPONSIBILITY FOR WORK.

General: Until acceptance of the project by the Engineer the Contractor shall be responsible therefore and shall take every precaution against injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work before acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, of a public enemy, or governmental authorities. For purposes of this paragraph the term work shall exclude Contractor owned, rented, or leased materials, equipment, and incidentals.

109.06 EXTRA AND FORCE ACCOUNT WORK. Extra work ordered and accepted as specified in Subsection 104.03 will be paid for on a unit price or lump sum basis under a Change Order. The Change Order will be made before the work is started. When the Engineer deems it impractical to handle any Extra Work ordered on a unit price or lump sum basis, a Supplemental Agreement will be made and the work will be ordered done and paid for on a force account basis as follows: Any additional costs for Public Liability Insurance and Property Damage Insurance that are required in the Contract will be allowed and reimbursed at the actual cost to the Contractor.

DIVISION 200: EARTHWORK

201.03 GRUBBING. Grubbing shall consist of removing and disposing of all stumps, roots, duff, grass, turf, debris, or other objectionable material within excavation limits, and within fill limits where the embankments are to be made to a depth less than 1.5 m (5 feet) below subgrade. Grubbing areas shall also include any other areas shown in the Contract Documents. The grubbing shall progress in such a manner to prevent erosion. The excavated section left below the subgrade by removals shall be backfilled with approved excavated material or borrow and compacted to conform to the surrounding area.

SECTION 203 - EXCAVATION AND EMBANKMENTS

203.01 DESCRIPTION. This work shall consist of excavating and grading roadways, runways and railways (including the removal of slides), borrow pits, waterways, channels, intersections, approaches, and steps in hillside embankments; excavating unsuitable material from the construction area and beneath embankment areas, surfaces, and pavements; excavating selected material found in the construction area for specific use in the construction; constructing and removing detours shown on the Plans or directed by the Engineer; trimming and shaping of slopes; and disposing of all unsuitable or surplus excavated material. The work shall also consist of placing material in embankments and the grading of all material placed up to subgrade to the tolerance specified in the Plans. The work is classified as follows:

(a) Common Excavation. Common Excavation shall consist of the removal of all material, which can be accomplished with normal excavating machinery, encountered in grading the project and not classified to be removed as Solid Rock Excavation, Muck Excavation, Channel Excavation, Excavation of Surfaces and Pavements, or Excavation for Structures. Excavation required beyond the finished slope neat lines for slope stabilization, removal of sod and unsuitable material other than muck located in embankment areas, removal and stockpiling of topsoil, and removal of unsuitable material existing at or below subgrade elevation in excavation areas is also classified as Common Excavation.

(b) Solid Rock Excavation. Solid Rock Excavation shall consist of the removal of hard igneous, metamorphic, or sedimentary rock that requires blasting or the use of rippers; detached rock; boulders; mortared stone masonry; or concrete each having a volume of 2 cubic yards or more; and portland cement concrete pavement including any bituminous surface overlay material, encountered in the limits of excavation.

203.09 DISPOSAL OF SURPLUS EXCAVATION AND WASTE MATERIAL.

It is the contractor's responsibility to locate a suitable location for the disposal of all surplus or waste material. Disposal of surplus or waste material will not be paid for directly but shall be considered as incidental work pertaining to the grading or excavation contract item from which the material was obtained.

208.01 COFFERDAMS DESCRIPTION. The following is a summary from VTRANS 2011 Standard Specifications. VTRANS full specifications including submittals by a professional engineer shall apply. This work shall consist of the construction, material excavation within, dewatering, maintenance and removal of cofferdams in accordance with the Contract Documents. The work will be classified as follows:

(a) Cofferdam. This item shall consist of providing a method for the purpose of constructing, in the dry, a specific foundation or other component of a structure in accordance with Contract requirements. This may involve the design, construction, maintenance, and removal of a watertight structure or may involve alternate methods of de-watering and stabilizing the specific site. Construction of foundation seals per Contract or as required per Contractor plans and schedule of operations is also within the scope of work for the Cofferdam item. The Contractor shall obtain any and all necessary permits or clearances for alternate methods. A cofferdam may have only two or three sides depending upon the particular location and the Contractor's design.

Cofferdam Excavation, Earth: This item shall consist of all material excavated within the pay limits as set forth in these specifications or indicated on the Plans except solid rock, mortared stone masonry, concrete, and boulders measuring 0.5 cubic meters (cubic yards) or more.

208.07 COFFERDAMS. The Contractor shall prepare detailed plans and a schedule of operations for each cofferdam specified in the Contract. Construction Drawings shall be submitted in accordance with VTRANS Specification Section 105.

Cofferdam construction shall conform to AASHTO Standard Specifications for Highway and Bridge Construction, Division II, Section 1.4. Cofferdam. The quantity to be measured for payment will be on a lump sum basis for each cofferdam specified on the Plans or in the Contract.

(b) Cofferdam Excavation, Earth. The quantity to be measured for payment will lump sum and included as part of the culvert excavation.

208.08 PUMPING. Pumping from or dewatering of the interior of any cofferdam enclosure shall be performed so that disturbance of the subsoil or freshly placed concrete will not occur. Dewatering of a sealed cofferdam will be in conformance with the Contractor's sequence or schedule of operations. Pumping during the construction of a foundation or other structural component shall be from a suitable sump separated from the concrete work.

DIVISION 300: SUBBASE AND GRAVEL COURSES

301.05 SURFACE TOLERANCE. The surface of the compacted road subbase will be checked by the Engineer randomly at selected locations. The variation of the surface shall at no point exceed 2 inches. The required crown and superelevation shall be maintained. All humps or depressions exceeding the specified tolerances shall be corrected by reshaping or removing defective work and replacing it with new material as directed by the Engineer.

The maximum layer thickness for placement of any aggregate surface material shall be 12 inches after compaction. All layers shall be placed and compacted at approximately equal thickness. After each layer of surface material is placed, it shall be thoroughly compacted to a uniform density of not less than 95 percent of the maximum dry density determined by AASHTO T 99, Method C. Suitable and effective equipment, meeting the approval of the Engineer, shall be used to obtain a true and even surface during compaction. All holes or depressions found during the compacting shall be filled with additional material, reworked, and compacted. If required, water shall be uniformly applied over the aggregate material during compaction in an amount necessary to produce proper consolidation.

301.06 COMPACTION. Compaction of each layer shall continue until a density of not less than 95% of the maximum dry density has been achieved. Field density testing will be performed by the TOWN in at locations determined by the Engineer. Compaction operations shall proceed such that the target field density as determined in accordance with this Subsection is achieved. The contractor shall give the ENGINEER adequate time to allow for compaction testing.

301.07 METHOD OF MEASUREMENT. The quantity of subbase to be measured for payment will be the number of cubic yards of the type specified for use in the complete and accepted work, as determined by the plan dimensions of the compacted material.

END OF NARRATIVE