

the TOWN of HARRISVILLE

in the Monadnock Region of New Hampshire
incorporated in 1870

Town Offices
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Request for Proposal

RFP 20101 - EECBG 70

Attic Insulation at Town Buildings

Due: November 4, 2010 by 3 pm EDT.

Deliver to:

Office of Selectmen
Town Offices
705 Chesham Road, Harrisville, NH 03450

Background:

The Town of Harrisville has identified three insulation projects at three Town buildings, and applied for and obtained Federal ARRA and State OEP grant funding which when combined with Town funding will allow the completion of these projects.



Figure 1 - Town Fire Station

The Fire Department is a single story building constructed around 1984, at 699 Chesham Road adjacent to the Town Offices.

The 67 foot by 58 foot structure is roofed with prefabricated single span light-weight wood trusses. Existing roof/ceiling insulation consists of 6 to 8 inches of blown fiberglass installed above a vapor barrier in the lower chords of the roof trusses. Access is by attic hatch.



Figure 2 - Town Office Building

The Town Hall at 705 Chesham Road is a single story structure built in 1996. It is roofed with prefabricated light-weight wood trusses creating an attic-level storage room about 1/3 the floor area of the first floor. Original attic insulation consists of R-30 unfaced fiberglass batts installed in the lower chords of the roof trusses, and R-19 batts at the knee walls of the storage room. There is no air barrier and no rigid

ceiling. A suspended ceiling is hung below the trusses as a finished ceiling. Approximate dimensions of the first floor is 42 feet by 48 feet. Access is by access panels in knee walls and by ceiling hatch to attic above second level storage room.



Figure 3 - Town Police Station

A former train depot dating from Harrisville's historical past serves now as offices for the Police Department. This 20 foot by 36 foot building is on the corner of Main Street and Skatutakee Lake Road .

The structure is framed with conventional attic rafters and ceiling joists. Ceiling joists are carried by framing below the top plate of exterior walls, creating space for added insulation. Attic insulation consists of unfaced R-19 fiberglass installed at ceiling joists. Access is by attic hatch and by exterior gable end attic window.

This RFP solicits a Contractor to complete the Attic Insulation Project described herein.

Project Scope:

Proposed insulation improvements will decrease heat loss through increased R-value and reduced air leakage. Work shall be scheduled and sequenced so as not to prevent the ongoing use of any of the buildings.

Building 1: At the Fire Station, install new preformed eave vent/insulation baffles at attic perimeter. Above existing fiberglass batt insulation, install R-38 (minimum 10 inches) of cellulose loosefill insulation to bringing total attic insulation levels to R-60 minimum.

Building 2: At the Town Offices, install temporary protections and staging as necessary to work within existing attic where no rigid ceiling separates occupied and unoccupied spaces. Block existing ridge and eave vents from inside. Install spray-applied foam insulation directly to the underside/inside of roof sheathing and gable end wall sheathing. Apply in a minimum of three passes to a total average thickness of 6 inches (R-43). Extend insulation over perimeter blocking to tie into top of all exterior wall plates, so as to form an air-tight seal. Protect installed insulation with a flame-barrier/fire retardant meeting 2006 International Building Code requirements for protection of foam insulation in attics. Provide temporary construction fans for forced ventilation of attic (exhaust through gable end windows of storage room) placing occupied first floor areas under negative pressure during all insulation or fire-retardant applications.

Building 3: At the Police Department, remove existing fiberglass batt insulation at attic floor. Inspect substrate for electrical wiring or communications cabling. Protect any found with polyethylene slip sheets. Apply minimum average 1-inch (R-6) application of spray-applied insulating foam to create an air barrier above the ceiling plane. Extend foam unto top of perimeter wall plates. Install new preformed eave

vent/insulation baffles at attic perimeter. Above the spray foam air barrier, install R-60 (minimum of 16 inches) of cellulose loosefill insulation to bringing total attic insulation levels to R-66 minimum.

Technical Specifications

spray-applied foam insulation

Closed-cell polyurethane foam insulation: ASTM C 1029, Type II, non-CFC, from approved manufacturer with a minimum density of 1.6 lbs per cubic foot, minimum R-6 per inch, a maximum flame spread rating of 75 and a maximum smoke-developed index of 450 per ASTM E 84. Products that may be used include, but are not limited to:

1. CertaSpray; CertainTeed Corporation.
2. Heatlok Soya/Polarfoam Soya/Airmetic Soya; Demilec USA
3. UTC-5070; Urethane Technology Company.
4. BioBased 1701s; BioBased Insulation, LLC.

flame-barrier/fire retardant

Class A Rating Required; Flame Spread Maximum: 25 and Smoke Developed Maximum: 450. The thermal barrier product shall have been tested in accordance with the procedures of UL 1715 and ASTM E84, and reported by a recognized independent testing agency. The thermal barrier product shall be applied at the required thickness per the applicable test standard.

cellulose loosefill insulation

cellulose insulation with more than 85% of the content by weight from recycled wood-based cellulose fibers. Chemically treated to create fire resistance. The additives should be non-toxic, not irritate normal skin, not attract vermin or insects, and not adversely affect other building materials. Class 1 Building Material – Flame Spread Maximum: 25 (ASTM-E84). 1.3 - 1.75 lb/ft³ density (ASTM C739), Thermal Conductivity: R-value of 3.8/in (ASTM C518), Moisture Absorption: <15%.

Special Conditions:

Work is to be completed in accordance with a grant awarded through the New Hampshire Energy Efficiency and Conservation Block Grant Program; this program is fund through the American Recovery and Reinvestment Act and the Energy Efficiency and Conservation Block Grant program as approved by the U.S. DOE, NH OEP and the Grant Management Subcontractor TRC. All contracts for work under this bid, must comply with specific federal requirements, including but not limited to, the Davis-Bacon Act, the Buy American Act clause (Section 1605 of ARRA), the National Environmental Policy Act, and National Historic Preservation Act.

The Town is a Sub-recipient of grants managed by TRC Environmental Corporation. Any contract awarded a vendor as a result of the RFP will be a Sub-Contract to the prime contract between the Town and TRC, and be subject to various 'flow-through' provisions. Contractor will be required to adhere to all Federal, State and Local regulations and guidelines as they pertains to the project, including ARRA Special Provisions and Federal Requirements for EECBG projects. See Exhibit C "Special Provisions ARRA Standard Terms: EECBG Program" available on the Town web site (www.harrisvilllenh.org) or supplied upon request for requirements.

