CAPITAL EXPENDITURE DESCRIPTION – DETAIL
DEPARTMENT/BOARD – LINCOLN PUBLIC LIBRARY

Project/Expenditure: Elevator smoke vent
Department Head: Barbara Myles, Director
Fiscal Year: 2008
Cost: $20,000
Priority: # 2 of 2

(1) Description (Please include any brochures on product): Upgrade the existing smoke vent in the elevator from one that is simply an open louver to a vent with a damper that meets current elevator and fire code standards.

(2) Useful Life: 20 years

(3) Purpose:
   ___ Scheduled Replacement *
   ___ New/Expanded Service
   ___ Other (Please Explain)

   Increased Personnel Efficiency
   Replace Obsolete/Unsafe Equipment*
   *Please explain how old equipment will be disposed of.

Install equipment in the elevator shaft that will exhaust any smoke from a fire

(4) Justification:
The condition site survey conducted in January 2004 by Simpson, Gumpertz and Heger alerted us that the Plexiglass covering the elevator's smoke vent was unsafe and had to be removed. Once the Plexiglass was removed, the elevator began malfunctioning in cold weather. (The hydraulic oil for the elevator thickens and the result is that the floor of the elevator does not level correctly with the floors of the library.) The open louver is allowing heat from the building to escape through the elevator shaft. The temperature in the elevator cab during the winter declines to the 40 degree range.

(5) How did you determine this project's priority? Safety concerns and energy conservation.

(6) Estimated Cost: $20,000 (Please remember to attach the written estimate.)

(7) Additional Cost Data (Equipment Only)
   Purchase Price: $
   Less Trade-In: $
   Net Cost: $

(8) Are non-Town revenues available to reduce cost:
   This project is eligible for CPA funding.

(9) What will be the effect on your department if this project is delayed?
   Library patrons could trip and fall while entering or exiting the elevator. The library will spend more on heating bills until the open louver is replaced with one that has a damper.

(10) Please describe the effect if this project on your Operating Budget.

   Personnel Budget:
   ___ increase
   ___ decrease
   ✓ no change
   amount of change

   Expense Budget:
   ___ increase
   ✓ decrease
   ___ no change
   amount of change

   Detail: A new smoke vent, that is closed except in the case of fire, will result in the consumption of fewer gallons of heating oil.

Attachments (if any):


2008-01
To: Building Committee
From: Barbara Myles
Date: 9/5/2006
Subject: Capital Plan FY 2008 Budget - Smoke vent upgrade

Attached are plans and a price quote for upgrading the library's existing smoke vent. The existing smoke vent is a louver that is fixed in the open position. In January 2004 the condition site survey performed by Simpson, Gumpertz and Heger reported that the piece of Plexiglas covering this open louver must be removed because it is a fire hazard.

When the custodian removed the Plexiglas, however, cold air entered the elevator shaft. The engineer from SGH did not consider the consequences of removing this piece of Plexiglas. We learned that the cold air thickens the hydraulic oil and the thick hydraulic oil prevented the floor of the elevator from leveling with the floors of the library. Uneven floors are a trip hazard. Staff and patrons have tripped but no one has fallen yet.

Attached are mechanical and electrical plans drawn by Fitzemeyer & Tocci, an email from Fire Chief Cotonii stating that he approves F&T's engineering drawings, a price quote ($18,995) from Fraser Engineering for performing this work, and cut sheets of the new equipment they would install to upgrade the library's smoke vent.

This project is much more involved and costly than I imagined! I would like to add this project to the list of building projects we request in the library's FY 2008 capital plan budget.

Thanks for your consideration.
REMOVE EXISTING LOUVER AND BIRD SCREEN. REPLACE WITH NEW AS INDICATED ON DWG SKM-5

TOP OF ELEVATOR SHAFT HOISTWAY / ROOF PLAN
MECHANICAL / ELECTRICAL DEMOLITION

LINCOLN PUBLIC LIBRARY
FITZEMEYER & TOCCI ASSOCIATES, INC.
MECHANICAL/ELECTRICAL ENGINEERS

DATE: 12/05/05
SCALE: 1/4"=1'-0"

PROJECT NO.: 05086.00
SKETCH NO.: SKME-4
TO FIRE ALARM SYSTEM
WIRE SIZE SHALL MATCH EXISTING SYSTEM

TO NEAREST AVAILABLE 120VAC, 20 AMP, 1-POLE CIRCUIT BREAKER

2#12 & 1#12G-1/2"C

ELEVATOR SHAFT HOISTWAY

REVERSE-ACTING THERMOSTAT

PROVIDE NEW 42"x24" LOUVER (MIN 3 SQ. FT. FREE AREA) BASED ON GREENHECK ESD OR EQUAL WITH FULL SIZE PLENUM AND 1/2" WIRE MESH BIRD SCREEN. PROVIDE MOTORIZED DAMPER INTERLOCKED WITH TEMPERATURE SENSOR AND SMOKE DETECTOR (ASSOCIATED WITH FIRE ALARM SYSTEM). DAMPER SHALL BE NORMALLY CLOSED AND OPEN UPON UNDER EACH OF THE FOLLOWING CIRCUMSTANCES:
(a) TEMPERATURE OF 85°F OR GREATER
(b) ACTIVATION OF FIRE ALARM SYSTEM
(c) POWER FAILURE
From: "Scott LeClair" <sleclair@f-l.com>
To: "Barbara Myles" <BMyles@minlib.net>
Date: 01/12/2006 08:24 AM
Subject: RE: Elevator vent questions

Barbara,

With regard to your questions....

1. The original design was OK for the time of installation, but the codes for elevator machine room ventilation (actually exhaust) have indeed changed. The current sketches show the room being provided with the current code mandated exhaust (and make-up air via transfer).

2. I'll need to spend a little time to come us with a cost estimate...I'll try to get at this early next week and get it to you as soon as possible.

3. I'd need to dig further to determine if the existing vent was adequate for the time of installation, it definitely doesn't meet current codes, however. I believe it is up to the individual elevator inspector's as to whether they continue to allow currently non-compliant vents (i.e. grandfather them).

Hope this helps...please call with any questions.

Thanks,

Scott

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Scott E. LeClair, PE
Principal
Fitzemeyer & Tocci Associates, Inc.
92 Montvale Avenue
Suite 4100
Stoneham, MA 02180
Phone: (781) 481-0210 x136
FAX: (781) 481-0203
Mobile: (603) 321-6603

-----Original Message-----
From: Barbara Myles [mailto:BMyles@minlib.net]
Sent: Wednesday, January 11, 2006 1:50 PM
To: Scott LeClair
Subject: Elevator vent questions

Scott,

I have some questions for you about the elevator vent study you and Steven O'Connell performed at the library.

1) Sketch number 1 shows demolition to the existing HVAC duct work. It
looks like the duct that connects the elevator room to the supply air duct is blocked off. Sketches 2 and 3 show the plan to move one end of the duct from the supply air duct and to the exhaust air duct. Can you explain why this change is necessary? Was the original design incorrect?

2) I am preparing next year's budget and need an estimate for this work.

Can you please give me a budget estimate for this work?

3) Sketches 4 and 5 show the size of the existing vent increasing substantially. I understand that we need to meet current building code requirements but can you tell me if the existing vent, which was installed in 1989, met the building code for 1989? If the vent did not meet 1989 building code, I have the chance to fast track this project.

Thanks for your reply,
Barbara
Director
Lincoln Public Library
3 Bedford Road
Lincoln, MA 01773
(781) 259-8465
fax (781) 259-1056
From: "Cotoni, Arthur" <cotonart@lincolntown.org>
To: "Barbara Myles" <BMyles@minlib.net>
Date: 03/17/2006 10:56 AM
Subject: RE: Mechanical drawings for elevator vent at Library

Barbara, I believe this is all set Artie

-----Original Message-----
From: Barbara Myles [mailto:BMyles@minlib.net]
Sent: Wednesday, March 15, 2006 12:47 PM
To: Cotoni, Arthur
Subject: Mechanical drawings for elevator vent at Library

Chief Cotoni,

Has Lt. Russes had a chance to look at the plans for modifying the elevator shaft so the vent is brought up to code? I want to make sure the plans are approved by you before moving ahead with this project.

Thanks,
Barbara
Director
nolan Public Library
Bedford Road
Lincoln, MA 01773
(781) 259-8465
fax (781) 259-1056
FRASER
Engineering Company, Inc.

65 Court Street
Post Office Box 9142
Newton, Massachusetts 02460-9142

September 1, 2006

Barbara Myles
Lincoln Public Library
3 Bedford Road
Lincoln, MA 01773

RE: Smoke vent in elevator shaft upgrade

Dear Ms. Myles:

We are pleased to offer our revised proposal for the smoke vent in the elevator shaft upgrade at Lincoln Public Library, Lincoln MA. The work is in accordance with Fitzmeyer & Tocci Associates design drawings SKME-1 through 5 dated 12/5/05.

Our lump sum cost for the work is Eighteen Thousand Nine Hundred Ninety Five ($18,995.00) Dollars with the following qualifications:

- All work shall be preformed during normal working hours.
- Sales tax is not included.
- Prevailing wages are included.
- Cost includes required saw cutting of new wall openings.
- Cost includes roof flashing repairs required by the installation of the elevator shaft louver.
- Quote based on providing Greenheck Model BSQ Fan and Buckley Model EAL Louver.
- Duct liner or insulation is not included.
- An additional cost of $100 to be added if fire damper is required in the existing transfer duct. (SKME-2 note)

Thank you for the opportunity to provide this proposal. If you have any questions or need additional information please contact Fraser Engineering.

Sincerely,

Lynne Decker, P.E.
Fraser Engineering Co., Inc.