

Town Hall Renovation Committee
Meeting Minutes May 6, 2008 @ 5:00 PM Town Hall

As approved May 13, 2008

Present for the Committee and attending the meeting were: Bea Phear, Kent Healy, Kathy Logue, Jim Osmundsen, Ginny Jones, and Chuck Hodgkinson. Selectman Dick Knabel and Bruce MacNelly also attended. Owner's Project Manager Jamie Doyle participated via conference call. Kate Warner was absent.

Bea opened the meeting at 5:00 PM. The meeting minutes for April 22 and April 29 were reviewed. Revised versions will be discussed at the next meeting.

HVAC MAY 2 MEETING: The Committee discussed the meeting minutes from the May 2 meeting that Chuck, Kent, Jim and Jaimie attended in Falmouth with K&K and Wayne, the Mechanical Engineer--attached. The Committee agreed the meeting was very productive. After discussion the following motion was made: 1. Approve the recommended HVAC system as described in the May 2 minutes. 2. Approve the recommendation to hard-wire the lights and vent fans to one switch in each of the four bathrooms and the janitor's room and add the motion sensor to each room as described. 3. Approve adding a CO2 sensor to each of the three HVAC systems as recommended. 4. Do not add the three main Heat Recovery Ventilators (HRV's) for the reasons cited in the May 2 minutes or any of the smaller HRV's to the bathrooms or janitor room. The motion was seconded. After brief discussion the motion was unanimously approved.

BRUCE MACNELLY: Bruce MacNelly offered to volunteer his time and become a member of the Committee for the construction and finishing phases of the project. The Committee thanked Bruce for all of his time and contributions to date and unanimously welcomed and endorsed his participation and leadership. Dick K. said he will recommend Bruce's appointment at the May 7th Selectmen's meeting.

STATE-OF-THE-ART INSULATION DESIGN: The Committee discussed K&K's request for an independent certification of the super tight insulation package Kate designed for the building. Bruce offered to discuss this with Kate and work with her to obtain the appropriate certification.

CONSTRUCTION SCHEDULE: Bea shared that K&K offered to increase the construction window for the bid documents from 12 months to 16 months. The Committee discussed that the proposed start date of early October would mean we would have two winters and one summer for construction. A consensus was reached that the construction window should be extended to eighteen months as originally proposed to K&K because of the seasonal timing and increased travel time for off-island contractors. This means the standard construction delay penalties imposed on the contractor will not take effect until 18 months after construction begins.

Kathy also recommended and Jamie confirmed that a contractor's schedule of values will be provided as part of their submissions. This will dictate the cash flow needs during construction.

PLAN REVIEW: Bruce and Jamie will schedule a time to review all of the current drawings this Sunday, May 11.

BASEMENT INSULATION: The Committee discussed and agreed to have K&K prepare the specifications for insulating the interior basement walls with sheet rock added for fire prevention. The ceiling insulation will not have sheet rock over it. This is a clean addition to the plan and will be positioned as an add/alternate segment of the bid specs.

WALKWAY: The Committee confirmed the walkway that runs parallel to the parking area will be concrete. The specs will be revised accordingly.

ACCESSIBLE RAMP AND RAILING: The committee agreed the proposed accessible ramp and railing design near the main entrance needs additional work to provide a more convenient travel way without expanding the footprint of the parking lot.

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MAIN ENTRANCE STEPS: The Committee discussed the need for the section of the main entrance steps that wrap around and face the east. The Committee agreed to ask K&K to redesign the steps for a south exit from the main door only. This change may also produce some savings.

SITE PLAN CONSTRUCTION FENCE: The Committee discussed the need to have all four limits of the construction area indicated on the site plan. The trees along Music Street should be outside the construction fence. This will be added to site Plan # 4 and # 5. The construction fence will be removed from the existing conditions site plan # 3.

PERMITS: Jim volunteered to work with K&K and draft the renovation building permit application. The deadline for submission is Tuesday, May 27. Kent confirmed that a separate building permit will be required for the temporary town hall facilities. Chuck and Kathy will work on this. Kent added that all of the Board of Health permits have been obtained and he needs clarification on which trailer will be hooked up to the temporary septic tank. An electrical permit will also be needed for the temporary facilities.

TEMPORARY TOWN HALL: Kathy mentioned the temporary trailer expense will need to be put out to bid.

CAPE LIGHT COMPACT: Jim updated the Committee on the Cape Light Compact grant opportunity and said he will continue to follow up on this prospect.

INVOICES AND FINANCE: The Committee voted unanimously to recommend payment of a \$6,525 invoice for Maciel Landscaping for transplanting and caring for the relocated trees and shrubs and \$9,427 for compensating Jamie Doyle, the Owner's Project Manager (OPM). Approximately 150 of the budgeted 240 Phase I OPM hours have been used.

CEILING FANS: The Committee agreed we need to spend more time with K&K to select ceiling fans.

Date: May 2, 2008; Minutes prepared by Chuck H.
Location: K&K office; Falmouth
Attendance: John, Antonia, Liz, Wayne, Kent, Jamie, Jim, Chuck
Purpose: Discuss HVAC system

The following outlines the key points made during the discussion. They are in no particular order of importance:

1. K&K and Wayne are committed to make our building as state-of-the-art energy efficient as possible.
2. The current propane gas fired hot air system is made by Lenox. It has a 94 % efficiency rating. This means 94 % of the propane burned is converted into heat energy.
3. Wayne has used the Mitsubishi system described by Marc R. He did not recommend it for this building because it is an expensive product to purchase, install and is a heat pump system that runs on electricity. A Mitsubishi heat pump system will use much more electricity (kilowatt hours) than the Lenox system. Power plant electricity generation is approximately 27 % efficient – conversion of fossil fuel energy into electricity. Wayne added that he does not usually recommend heat pump systems for year-round use in the Northeast because of the temperature differences in winter vs. summer.
4. Wayne used Massachusetts Building Code dated 1993 because that is the current code. Code standards mandate for commercial office buildings the following amounts of outside air ventilation for HVAC systems. These standards cannot be lowered to compensate for our state –of-the-art insulation design. Code is code. Our system provides 1200 cubic feet per minute (CFM) of fresh air ventilation:
 - a. 20 CFM of fresh air per person.

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- b. 100 CFM per vented toilet and janitor room. Residential code calls for 75 CFM per bathroom. Wayne uses 100 CFM for commercial office space because it provides better odor control.
 - c. The 1200 CFM load for our system was specified as follows:
 - 4 bathrooms and one janitor room @ 100 CFM each = 500 CFM.
 - 35 people @ 20 CFM/person = 700 CFM.
 - We have 15 work stations and public seating for 24 in the three conference rooms = 39 person capacity.
 - The bathrooms and janitor room are using 42 percent of our required CFM of fresh air ventilation ($500 / 1200 = 42\%$).
 - d. Perhaps Marc R.'s calculation of a 60-person system ($1200 / 20 = 60$) did not consider the CFM code requirement for 4 bathrooms and one janitor room.
 - e. The three Lenox furnaces are only one size larger than the smallest available furnace. Wayne evaluated using the smallest Lenox furnace and rejected it because it barely provided the minimum capacity needed for the building. He prefers the slightly larger unit and air ducts because they will provide a much higher quality of heating and ventilation. Smaller air ducts would require larger blowers to move the volume of air and the smaller ducts would create noise. He thinks the current system and the location of the furnaces will be inaudible by the building occupants.
5. Heat Recovery Ventilation (HRV).
- a. HRV primary benefits are realized during the winter. There is less heat for recovery in the summer when the A/C is in use. If the windows are open in the summer there is no heat recovery or efficiency benefit.
 - b. HRV's generally recover about 50 % of the heat loss.
 - c. The HRV's would primarily function when the building is occupied or in use and the heating system is maintaining a comfortable working temperature – 8 to 10 hours out of a 24 hour day Monday – Friday. Little use on weekends.
 - d. We would need 3 HRV units – one for each floor and system.
 - e. Cost is \$2500/unit plus ductwork, installation and revised plans – total about \$10,000 to \$15,000.
 - f. Another option for our consideration is to install five small HRV units – one for each bathroom and the janitor room. These rooms have mechanical air exhaust fans to the outside air. This is 42% of our CFM load.
 - g. Wayne recommends: Hard wiring the lights and exhaust vent in each bathroom and the janitor room together – the fan automatically comes on when the light switch is turned on. The noise of the fan will remind people to turn off the light and fan when they leave. An additional motion sensor can be added to each of these rooms to turn off the light and fan if someone forgets to turn off the switch.
 - h. The heat loss through bathroom vents will not happen frequently --only when the rooms are used.
 - i. Wayne will revise the designs however we wish – adding three main HRV units and ducting and/or five small HRV units in the bathrooms and janitor room. This change will take about 2 weeks to execute in the drawings and specs.
 - j. Wayne does not think adding HRV's is an efficient use of money because of the limited use of the bathrooms (42% of CFM load and heat loss). The primary HRV benefits will be realized in the winter when the building is in use and the heating system is on. The tight insulation package will also help mitigate heat loss. He estimated a 15 to 20 year payback for the three main HRV units at today's energy prices. He added energy prices will continue to inflate which will reduce the payback time.
 - k. Wayne thinks HRV units are more useful in large office buildings (Woods Hole is about 25,000 sq. ft. of office space). We have about 4800 sq. ft. of usable office space plus the bathrooms and janitor room.

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- l. Wayne will provide the projected energy use of the current recommended system by the end of next week (week of May 6). The data will be calculated in kilowatt hours of electricity use and propane use.

6. System Controls.
 - a. The current HVAC system has the following controls: thermostats (one on each floor) with programmable 7-day timers. Each sensor is in the center of each floor.
 - b. If we agree, Wayne will add the recommended motion sensors in the four bathrooms and janitor room.
 - c. Each of the three furnaces has two burn levels. When the heat first comes on the flame is at the low burn level. A temperature sensor monitors how quickly the heat rises to a predetermined level after a certain amount of time. If the temperature is not high enough after a certain amount of time passes the furnace automatically shifts to high flame burn to increase the rate of heating.
 - d. CO2 sensors. Wayne recommends adding separate demand control ventilation CO2 sensors to each return duct on each floor. These sensors detect the amount of CO2 that is being created (by people etc.). If the CO2 level is below a certain point the system will not turn on. Conversely, if the CO2 level on the floor increases the system is turned on. This adds a more sensitive and efficient layer to the operation of the system's control mechanisms. The estimated cost for a CO2 sensor is \$500 + wiring (total \$1500 + wiring).

7. Summary. Here are our next steps for the HVAC system:
 - a. Receive the energy use data from Wayne – week of May 6.
 - b. Decide on whether or not to keep the recommended HVAC system.
 - c. Decide on the addition of the motion sensors in each bathroom and janitor closet.
 - d. Decide on the addition of the CO2 sensors.
 - e. Decide on the addition of the three main HRV units and/or the five smaller units for each of the 4 bathrooms and the janitor room.

8. Other stuff we discussed.
 - a. K&K is fine with the 18 month construction window for the bid documents.
 - b. Jamie discussed and K&K agreed to accept the liability for the super insulation package Kate designed (closed cell foam etc.) provided it is certified by an independent consultant. They will have this done. K&K has never used this system and need the vapor barrier elements confirmed as acceptable before they will accept the liability i.e. mold protection etc.
 - c. Need to formally communicate the concrete sidewalk decision and finalize the accessible ramp, railing and parking space details.
 - d. K&K agrees the basement insulation should be an add/alternate change order. They think this is very easy to do because it is a clean addition to the current plan. No alterations will be required due to the change.
 - e. We saw a full-sized test mold of the Azek window trim and detail.
 - f. Once all of these open items are decided and designed K&K will need about one month to prepare and certify the final drawings and bid documents.

With no further business to discuss the meeting adjourned at 6:50 PM.

Respectfully submitted by Chuck Hodgkinson.