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**CONSTRUCTION PROJECTS COMMITTEE**  
**WEDNESDAY, AUGUST 8, 2007**  
**NASHUA HIGH SCHOOL NORTH LECTURE HALL**  
**7:00 PM**

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A meeting of the Construction Projects Committee was held at Nashua High North on **Wednesday, August 8, 2007**. Alderman McCarthy called the meeting to order at **7:06 p.m.**

Present: Alderman McCarthy, Alderman Tabacsko, Mr. Dowd, Mr. Kelley, Mrs. Kwan

Also Present: Mrs. Ziehm, Alderman Cookson, Alderman Deane, Alderman Flynn, Mr. Vaughan, Alderman Teeboom, Mr. Hogan, Mr. Mealey, Mr. Smith,

Also Present: Steven Caulfield (Turner Systems), Carl DuBois (Harvey Construction)

*Presentation of HVAC Project Proposals*

**Mr. Smith**

We could certainly do that and put those words in there. At this time, we have not yet decided on an option. Geo Thermal is one of several options.

**Alderman Teeboom**

We haven't agreed on anything yet, but if geo thermal is an option, I'd like this Construction Manager to have experience with geo thermal so he knows what he's talking about.

**Alderman McCarthy**

I would contend that that's covered by specific construction management experience on projects of similar program or scope.

**Alderman Teeboom**

Geo thermal is a specific term, and if you're serious about that, it ought to be in this RFP as a qualification of the construction manager.

**Alderman McCarthy**

I would suggest that it be included in page 2, under The Project that geo thermal is an option that we may want to explore.

**Alderman Teeboom**

Page 2 is a different issue. But I'm talking about specific qualifications. Isn't there a section that defines the qualifications for the Construction Manager?

**Alderman McCarthy**

No. On page 3, under the issues to be addressed, it says that the construction manager must identify its experiences with projects of similar program or scope. You'll notice that none of this paragraph mentions HVAC, because that's in the scope of the project as stated on page 2. Which is why I suggested that we add Geo-Thermal to page 2 in the scope of the project.

**Alderman Teeboom**

Well, that's true. Okay, on page 4... you have a 3<sup>rd</sup> bullet under responsibilities. Can somebody explain what the second sentence means?

**Alderman McCarthy**

Yes, I can tell you exactly what that means. Often in these projects it is necessary for us to hire contractors outside the scope of those subcontracted by the Construction Manager or general contractors. Typically, that occurs in the removal of hazardous waste. It says that if we are responsible for that, the Construction Manager is not responsible for making sure that that contractor meets the required schedule. That is the owner's responsibility.

**Alderman Teeboom**

Do we typically hire outside contractors?

**Alderman McCarthy**

We have in virtually every project we've done. In this project there was basically upwards of \$1 million of hazardous material removal that was done by contractors brought in by the City. It is typically done for liability reasons the Construction Manager or General Contractor does not wish to subcontract hazardous material abatement.

**Alderman Teeboom**

Well, I think the way its written is unclear. I understand your explanation, but to me there's a problem hiring a contractor separately. At least it should be made clearer.

**Alderman McCarthy**

Again, I believe that those are adequately covered in the other documents, 121 and 201 the agreements between the order and construction manager in detail. This is a statement in fact for the request for proposals, not a binding piece of contract. They're referred to on page 5.

**Alderman Teeboom**

Finally, I thought this RFP was the job for the HVAC system. That's how we started. Do we really need a Construction Manager for the HVAC system?

**Mr. Smith**

Well, there are a lot of bits and pieces that go with the project. There's a lot of phasing and coordination, not only with mechanical contractors, but other contractors. For instance, if you went with the Geo Thermal system, you'd be hiring a drilling contractor that isn't necessarily mechanically inclined. You'd have some roof work associated with it, and that sort of thing. There is mechanical work, site work, possibly roofing work. There is quite a bit that goes with this.

**Alderman Teeboom**

So you feel that you need a Construction Manager for this project?

**Mr. Smith**

For the level of work that we're potentially looking at, a Construction Manager is very much needed.

**Alderman Teeboom**

What does the \$15-25 million construction relate to?

**Mr. Smith**

The \$25 million would be if we went with the Geo Thermal Solar option in all 3 schools. When you hear the presentation, you'll hear what the costs are.

**Alderman Teeboom**

I don't think you should put the costs in here. What does that mean?

**Alderman McCarthy**

What it means is, you don't want responses from somebody who has no experience in that range of scope.

**Alderman Teeboom**

So you're already saying this job will exceed \$15 million. Why put that in the RFP? I have a problem listing any figure.

**Alderman McCarthy**

Some of the things we need to look at when we hire Construction Managers or General Contracts are the previous experience, their ability to carry construction bonds commensurate with the project and basically we're stating that they have to be able to handle a project in the \$15-20 million range. It will probably be somewhere in that ballpark and it is best to understand that now, and it comes in lower that would be great.

**Alderman Teeboom**

My understanding was that it was around \$800,000 per school for \$2.4 million. Then it went all the way up to \$8 million, then Harvey Construction said \$14 million, and now it's up to \$25 million. These figures are all over the place.

**Alderman Deane**

I don't think it's a problem. I think it's a way to weed out who's not qualified and a way to not waste people's time. I certainly want to see the presentation before I pass any judgment on any part of this project at all. When we first looked at this, we knew there were boiler issues. Then we looked at different options, and potential cost savings, etc. There are a lot of different angles to look at. I don't want this to turn into the Broad Street Parkway.

**Alderman McCarthy**

When we did the high school project, it wasn't until we employed the services of the Construction Manger and had the schematic estimate of cost that we understood what the constraints were and were able to go back and make program adjustments in order to reduce that to a level that we could present as the costs. So it's very important to get the Construction Manager on board so we have an estimator who can put a price tag on the options given by the architect.

**Alderman Richardson**

I was looking for the scope of work in here, and I didn't see it. Is this RFP just preliminary at this point?

**Alderman McCarthy**

The RFP basically suggests the scope of work that's going to be managed. The agreements of the actual scope of work come out of the documents from the architects.

**Alderman Richardson**

Typically, I look for a little more than a one liner that says we're going to build some boilers and put in an HVAC system. There's nothing in here that I would consider a scope of work. So that's what I was looking for. I also look for deliverables in terms of data from the contractor, even if it's minutes from a meeting. There's nothing specified in here, but maybe it's buried in one of the AIA documents.

**Alderman McCarthy**

It is, in general.

**Alderman Richardson**

Typically, don't we tailor AIA documents?

**Alderman McCarthy**

To a large extent, but there are modifications, amendments, attachments that identify the more detailed scope. That's developed more during the contract process.

**Alderman Richardson**

How would a bidder know how to bid, if that wasn't spelled out here?

**Alderman McCarthy**

They're not bidding on a cost. As Construction Manager, they're bidding on a fee percentage based on what the eventual price that is produced by us, the Construction Manger and the architect winds up being. There is a thing eventually called the guaranteed maximum price agreed on.

**Alderman Richardson**

Until I see what we're going to be doing with the AIA documents, I'm a little uncomfortable. That is really the meat of the RFP. Are there any other terms or incorporated agreements of standards, etc?

**Alderman McCarthy**

I'm not sure what standards you're referring to.

**Alderman Richardson**

Professional standards, inspection standards, etc.

**Alderman McCarthy**

Those are typically covered in the provisions of the contract.

**Alderman Richardson**

I don't it's clear what we want the Construction Manager to provide.

**Carl Dubois**

I'm the Director of Project Planning for Harvey Production. I haven't seen this RFP, but I'll just speak in generalities as to how we normally respond to an RFP. We work with the architect and the owner, and our contract is with the owner. We three entities complete the project. There's the pre-construction, planning phase and the actual construction phase. The Construction Manager can either act as an agent to the owner where the owner owns the contracts, or what Shawn is proposing like your high school project, where the Construction Manager is the general contractor overseeing the project.

In the planning process, the CM would work with HL Turner to develop a series of estimates. It's a little early for that, because you're still looking at 3 options. Then you would provide a guaranteed maximum price. One you have the GMP you would have a standard construction project and the Construction Manager would get a fee for overseeing that project. So there are 2 fees. One is the pre-construction fee, then the fee for the overall fee for overseeing the project.

**Alderman Richardson**

What importance does this list have?

**Mr. Smith**

It's essentially the same list from the high school project. These are typical things that are in general conditions.

**Alderman Richardson**

I didn't see anything in here about asbestos removal, for example.

**Mr. Smith**

As we said earlier, that's removal of hazardous materials and that's our responsibility.

**Carl Dubois**

Things like asbestos removal, removal of school furnishings, etc. can either be the responsibility of the Construction Manager to go out and hire a moving company or the responsibility of the City. It just depends on whether you want to pay the fee on that portion of work. The City can certainly go out and solicit bids.

**Alderman Richardson**

When would you be doing this? I presume it would be summertime, when there's no classes going on.

**Alderman McCarthy**

The projects somewhat overlap. And the conditions for the high school project were covered in the AIA documents.

**Carl Dubois**

My involvement is looking at the Geo Thermal option, because it's such a large scope of work. There are numerous trades that have to be coordinated with the whole project. This can also be just a mechanical job of taking out one

boiler and putting another one in. Until you know which direction you're going, Shawn is just looking for help in pricing those various schemes out and seeing which direction the City ultimately wants to go. As a Construction Manager, we would prepare the estimates, present them to the committees, present the numbers... the decision would be made, and then the design team and Construction Manger would move forward.

On the Geo Thermal, I broke the school up into 6 phases. We've talked to the Fairgrounds principal trying to create swing space. We always separate construction workers from school children. So we developed a plan that shows how we would walk through each school. It would have 6 phases over 12 months for a Geo Thermal system at each high school. You can 3 schools at once, or 1 per year.

**Alderman Richardson**

But, we're not going to have heating or cooling during this time.

**Carl Dubois**

You're getting into the presentation.

**Alderman McCarthy**

Last time we discussed that we would buy an additional boiler for the duration of the project. We would temporarily pipe it in to each of the schools during summer. And our elementary schools don't have cooling. We would do the renovations, get the new boiler situated and at the end of the school year we would pipe in the new boiler, move the temporary boiler in the next school and at the end would probably install that as one of the real boilers at the last school. We would always have heating during the winters.

**Mrs. Ziehm**

Why would you hire a Construction Manager before you determine what he's going to manage? It seems to me that's the cart before the horse. It seems to me the first thing you do is decide what the project's going to be. If we go with one of the lesser options, do we really need to pay someone \$30,000?

**Alderman McCarthy**

We don't know what we're going to build until we have schematic estimates. That's why there is a pre-construction phase. Typically the selection of the Construction Manager is done as a professional service contract essentially. We either pay them a fixed fee or a percentage of some work, until we have an estimate to base it on. And that is the way we have handled essentially every project is to pre-contract some construction method to get to a point where we have an estimate that we can bring back as a hard cost. That's why we funded the project in 2 phases... pre-construction and architecture and then come back with another appropriation or bond.

**Mrs. Ziehm**

But if you decided to go in kind would you still pay \$30,000 for a Construction Manger?

**Alderman McCarthy**

Certainly. I don't understand your question.

**Mrs. Ziehm**

But aren't the preliminaries going to be different if it comes as Geo Thermal rather than in kind? And wouldn't that mean that the price would be different? And wouldn't you want to know what you're getting a price on before you... I don't know... it just makes sense to me that when you hire somebody the price is based on what they're going to do.

**Alderman McCarthy**

Those are basically parallel things. And until we see from the Construction Manager estimated costs on like systems or Geo Thermal... and it's not really like system. Even if we just replace with like boilers they'll be 20 years newer and there will be substantial changes that will need to be made. The only way we can make the decision about which system to go with, is to get some information about what constructions costs are going to be and that has to be done during pre-construction.

**Mrs. Ziehm**

And that's my whole basic disagreement. When you're spending money, the first thing you say is, can I afford this? While we're crying poor mouth all over the City, telling the teachers we can't afford books and letting go of all of the paras, but we're over here buying the Cadillac of heating systems. But I won't argue with you any further; I just want my comments on record.

**Alderman McCarthy**

I guess just to respond to that point, my understanding after seeing the presentation last time, is that this is a system where the yearly cost of debt service and operating costs is lower than what it would cost us to do in kind types of systems.

**Mrs. Ziehm**

I disagree with the figures that were presented to us, and I think they were inconclusive. I was told they did not include financing costs. When you add in financing costs to any it makes those figures very different. The temporary boiler was not included. I question greatly those figures. I think they were underestimated.

**Alderman McCarthy**

The last time it included finance costs if I'm not mistaken.

**Alderman Deane**

You have to take the human element out of this. You have to take the teachers out of this, the paraprofessionals out of this. You have to take all the materials they use out of this also. If the heating system fails in a school, there's no need to have anyone in a school. The school is closed. My interest, and I think it should be everybody's interest whether you call it a Cadillac or whatever, is looking and finding out what options were afforded to us, what the costs were, what the long term savings are. It's our responsibility to look at something like this. Yes, we can go replace in kind boiler systems. And if you're looked at the unghastly gas bills the school district pays every winter... they're over \$200,000! If we can reduce that, it's not a point of crying poor mouth. If we can reduce that amount the money can be used in other areas. That goes with the electricity and hot water. The other thing we have to look at is the City has not been a good steward of depreciation of a lot of the buildings we own. Is that the original boiler for Fairgrounds?

**Mr. Smith**

It is the original boiler for all 3 schools, and they were built in the mid 1950's.

**Alderman Deane**

So there you go. We have more than gotten our money's worth from our school's heating systems. Now if we had properly depreciated all of those components that we're look at replacing, we would have the money available through funding of appreciation. How much money has been put aside for the depreciation of this building? Next to nothing or nothing. It's a problem. So getting the manager on board, understanding the options available to us, what the pay back is, what the instances are... we have to know that to make an educated decision.

**Alderman Teeboom**

What's the estimate for this Construction Manager job and who's going to pay for this?

**Mr. Smith**

I don't think we know what the estimate is until we know what the construction method is, and the type of system that we're going to build it. Until we pick Geo Thermal, Replace in Kind or something in between, we're not going to know what the cost is.

**Alderman Teeboom**

I heard that the construction Manager was going to give us the costs options to choose from. That means you have a fee for this job. Unless we're ready to make that choice now, I don't see how anybody's in a position to make that decision now.

**Alderman McCarthy**

There are 2 different parts to the fee as Mr. Dubois explained. There's the pre-construction services, which we may do, on a fixed cost basis or on time and materials. And then there's the construction fee. Once we get the Construction Manager, it's part of the contract negotiations to determine what the cost is.

**Alderman Teeboom**

And who is going to pay for this RFP?

**Mr. Mealey**

The remaining money from the high school project was set aside for this project... for all costs of this project. It's under the authority of the Joint Special right now.

**Alderman McCarthy**

The remaining \$2.5 million from the High School Construction account was re-appropriated to the HVAC project.

**Alderman Deane**

The remaining fund balance from the high school project was rolled over and was put under authority of the Joint Special for this project.

**Alderman Teeboom**

When was that done?

**Alderman McCarthy**

We had meetings here to determine the final value of the high school project and wrap it up and it went back to the Budget Committee. It was early in the year.

**Alderman Teeboom**

So, \$2.5 came back to the general fund...

**Alderman Deane**

And was re-appropriated to this project.

**Alderman Teeboom**

So who controls that money right now?

**Alderman Deane**

It's under Joint Special, I believe.

**Alderman Teeboom**

I think you need to check on that.

**Mr. Smith**

Mr. Dubois said that the pre-construction piece is between ¼ and ½ percent of the construction cost.

**Alderman Cookson**

Mr. Dubois, thank you very much for providing us with some additional information. I thought the points he specifically stated were important, but I don't see those in the RFP. For example breaking out the pre-construction, construction phase.

**Alderman McCarthy**

They're in there. 101 is about 35 pages and 201 is probably 60-80 pages.

**Alderman Cookson**

What about the options that we would ask a CM to develop? Geo Thermal, In Kind and is there any other option?

**Alderman McCarthy**

It's generally up to the architect.

**Alderman Cookson**

So it is possible that a response to this RFP might produce different options?

**Alderman McCarthy**

Again, that is more likely to come from the architect's side.

**Alderman Cookson**

So when this RFP is returned and is evaluated, how is somebody able to make a decision on whether the responses that you receive back are comparable and can be evaluated?

**Alderman McCarthy**

In a construction manager RFP, what the responses are going to address is the qualifications of the Construction Manager to do estimations and construction management. Typically, what we'll get back will say we've done X projects of this kind, etc.

**Alderman Cookson**

Why is it important to have the principals of the firm identified?

**Alderman McCarthy**

You want to know who it is you're dealing with.

**Alderman Cookson**

You (Alderman McCarthy) had indicated that the 3<sup>rd</sup> paragraph on page 2 is in there for what purpose?

**Alderman McCarthy**

Just to indicate the scope of the project so that we can qualify respondents who have projects of similar size. It goes to their ability to bid and handle the work, insurance capabilities, construction bonding, etc. We want to make sure there will be adequate personnel to do our job.

**Alderman Cookson**

So that scope of exceeding \$15 million and potentially exceeding \$25, was reached on by experts

**Alderman McCarthy**

Based on the spreadsheet we received, it's based on 3 ballpark costs we received.

**Alderman Cookson**

Point 3 on page 3, you are already asking for the Construction Manager to provide anything in excess of \$5 million of anything they've done in the past 5 years. Then in point 10, when you indicate that paragraph 2, is to help put in the scope of the project of similar size so they can bid and handle the project... don't these 2 points (3 and 10) address those specific point so you don't necessary have to include a price of \$15 to \$25 million?

**Alderman McCarthy**

No.

**Alderman Cookson**

Why not?

**Alderman McCarthy**

Because 3 simply asks for their experience with projects over \$5 million. But 10 does not say what their bonding ability has to be. That is usually responded to by their bonding company, that they will extend a letter of credit to cover that project.

**Alderman Cookson**

Go back to point 3 again. If they produce something that's \$5, \$7 and \$8.3 million, and those are the only projects that they've done, and you know as someone who needs to make a decision, that you're anticipated the cost to be \$15, would that not potentially eliminate them from being considered for this bid?

**Alderman McCarthy**

If I'm doing the evaluation it would depend. If they did a \$5 million project 5 years ago, and a \$7 million project 3 years ago, and a \$8.3 million project last year I would rank them lower than a firm that has other experience. You sort of look at that whole thing and ask in the interview process if they're doing this because that's the size of your company and you're maxed out or because that's all there is in the market during that time frame. If on the other hand, they did a \$5 million, a \$7 million and an \$8.3 million project in the same year, I would react much more favorably.

**Alderman Cookson**

I think there's a concern with identifying the minimum value. I think you'll see that being produced by anybody submitting to this RFP.

**Alderman McCarthy**

That argument has been brought up every time we've done one of these project, and I've never seen anything that came out based on that.

**Alderman Cookson**

Your second point that you made in regard to #10, didn't address the bonding ability. I suggest that you put bonding ability in the request.

**Alderman McCarthy**

Just state the bonding value? We can do that. And then if we're going to do that, I would ask that that be "demonstrate ability for performance bond of \$25 million."

**Carl Dubois**

There is a reason to establish a dollar amount as a construction manager not familiar with the project. He has to have some realm of cost of what you're expecting this project to cost. It's not a fixed amount. It really doesn't mean anything except to us, we figure how much personnel, etc. and equate it back to a fee. You're not giving anything away by putting in that dollar amount. That's what we see 95% of the time. It helps us understand the magnitude of the project.

**Alderman McCarthy**

Under section 2, we were going to add that there might be a Geo Thermal component to the project. And it was also suggested that we add on the last page a breakout of things like furniture movement and hazardous waste removal will be the owner's responsibility.

**Alderman Deane**

I'd like to request that copies of the AIA documents that are mentioned, as well as the ones that were tailored boilerplates that you used... are they available?

**Alderman McCarthy**

I'm not certain if I had electronic copies of the modified ones. I had gone through all of those when we went through the Senior Center projects and can get copies of that to the committee.

**Alderman Deane**

So, if you have them on paper, Mr. Barker can scan them and compress them down to nothing.

**Alderman McCarthy**

I'll see what I can do.

**MRS. KWAN MOVED TO APPROVE THE RELEASE OF THE RFP FOR THE CONSTRUCTION MANAGER FOR THE HVAC BOILER PROJECT.**

**SO VOTED.**

*Presentation*

**Steve Caulfield**

I'm a mechanical engineer with Turner Building Science & Design. We're a subsidiary of HL Turner Group. We were hired through Shawn Smith to look at boiler replacement and HVAC renovation in the 3 schools. I'd like to give you a brief history of how we got to this point and what our evaluations showed us as potential options for the mechanical portion of this project. Carl Dubois is with Harvey Construction, and was brought on later in the project to help us evaluate what things would be necessary to be included in this project from a holistic point of view.

*PowerPoint presentation overview given of HVAC renovation and boiler replacement for Fairgrounds, Charlotte Avenue and Ledge Street Schools. Presentation available for viewing.*

**Mrs. Ziehm**

How did you come up with the bond amount?

**Steve Caulfield**

I didn't do the calculation myself. The interest is based on the total amount of the bond for each school based on the cost that we had for these options.

*PowerPoint Presentation resumed.*

**Mr. Vaughan**

You mentioned that the Geo Thermal efficiency was boosted by the solar hot water. How sensitive is that water coupled to weather?

**Steve Caulfield**

It would be a fairly large system and is sized for it to drip down in the dead of winter. It's sized to allow for it to drift down in the dead of winter. It's sized somewhere between 2 weeks and a month's worth of very cold, cloudy weather to sustain. You basically have a number of solar collectors in a large, underground tank, not unlike a septic ground underground. That's allowed to drift down to what the size of the tank needs to be to, and how much solar collection we need to maintain a minimum of about 100 degrees in that tank to boost that temperature in the Geo Thermal boost.

**Alderman Teeboom**

This savings is for over 25 years. Why does system 1 in Geo Thermal save you less in 25 years than system 2?

**Steve Caulfield**

This is not the savings, this is the total cost of owning and operating the system over 25 years.

**Alderman Teeboom**

So if you look at your bills over 25 years, it costs you \$5.5 million.

**Steve Caulfield**

If you look at all your bills. You look at your finance charges, your maintenance, your field costs and your capital costs. This is for 1 school. This was strictly looking at what we considered the variable costs associated with the project based on the impact of energy savings based on different mechanical systems.

*PowerPoint Presentation resumed.*

**Alderman McCarthy**

Can we talk a little more about asbestos removal? Do we know any or all of the places where there is asbestos in those buildings?

**Mr. Smith**

All the boilers, the roping in-between each section have asbestos in it. We've removed most of it elsewhere in the piping and lagging.

**Alderman McCarthy**

Do we know if the piping behind the case working is insulated for example?

**Mr. Smith**

Not off the top of my head. It's insulated, yes.

**Alderman McCarthy**

It seems like it would be a coordination nightmare if we have to remove casework and then do abatement in every classroom.

**Mr. Smith**

We have our standard reports that we update every 3 years. We'll go back and refer to those.

**Alderman McCarthy**

Do we know about other hazardous materials and what we're likely to encounter? Like lead paint, for example.

**Mr. Smith**

Yes, there's some lead paint in the school. We'll do the same thing we did in the south high school. Potentially in the older parts of the schools, it's likely that the under floor tiles contain asbestos. But we don't anticipate a lot of floor work, actually.

**Alderman McCarthy**

Do we think we have any mercury problems like we had at the high school?

**Mr. Smith**

No, those were because of the flooring material we used in the gym

**Alderman McCarthy**

Do we know if we have that same material elsewhere?

**Mr. Smith**

We're not aware of any.

**Alderman McCarthy**

What do we know about molds? We found some phenomenal mold farms when we started to take walls down at the south high school, and wound up having to do some emergency abatement there.

**Mr. Smith**

Well, there's always that potential, but we do keep a pretty close eye on those things in the schools.

*PowerPoint Presentation resumed.*

*Inaudible question asked by unidentified speaker*

**Steven Caulfield**

Well at this point, only one option has been priced. I guess our feeling was that with the condition of the schools we feel that these are things that need to be addressed in the schools. If just the mechanical work was done, and the new heating/ventilating systems were put in and that project cost between \$10 and \$15 million there wouldn't be much change in the look of the change and there probably would be a bad perception locally about what did we get for that money? Because it would be largely invisible. The other thing to consider is, they're basically 50 year old schools and they haven't had much work done to them over those 50 years.

**Alderman Deane**

They came to us with heating and ventilation problems. These other items that may compliment that, but I think the main concern was the fact that the boilers had far exceeded their life expectancy and there were air quality issues. The roof, the windows the fire alarm... I'd like to understand what we can back out of the project that's not really a requirement. That's what I'd like to ask. Could all the buildings use new windows? Absolutely. Mount Pleasant could use all new windows. But we have X amount of dollars and we're trying to get a good bang for our dollar and get some cost savings in.

**Mr. Smith**

I think that will all come out when we do the pricing.

**Alderman Deane**

Would we be eligible through PSNH for any rebate on the lighting?

**Mr. Smith**

Potentially, yes.

**Alderman McCarthy**

I guess what I'd like is to break those things out individually... energy savings, what they do to life cycle costs, etc. It will make better decisions. If the lighting is going to be a savings, there's no point in not doing it. If it's going to be an expense but makes things better, we'll have to prioritize that against other expenditures.

**Carl Dubois**

What I was asked to do was to look at Fairgrounds. I sat down with Shawn and Steve and after a series of discussions I solicited the assistance of a number of sub contractors. We walked the schools to get a sense of what needed to be done. We looked at how to phase this, how to work around the students, etc. We came up with a game plan. We looked at how to provide heat to the building while working. Once we started walking the school, we saw all the particulars that would make the plan snowball. We would replace in kind the ceilings that will have to come down to work. So we're looking at all the various elements when you get involved in this kind of system. It is not all mechanical. With a Construction Manager, we can look at what really makes sense. What do you really need to do to this project and provide adequate and realistic costs? This will give you some assurance that the cost is being tracked out while the design is being done to assure that you can actually afford what is on the papers. So it takes that element of risk out of the equation. There is a cost for that service.

**Alderman Teeboom**

I got your spreadsheet. Which option does this include?

**Carl Dubois**

It should be option 3, the Geo Thermal.

**Alderman Teeboom**

The cost is \$2.7 million. Now I'm looking at your stuff with additional stuff that has to be done and guess what that comes to? \$6.54 million. So what we got here is a little dog being wagged by a huge tail. How did \$2.7 million become \$6.54 million?

**Carl Dubois**

I think it was explained, Mr. Teeboom.

**Alderman Teeboom**

Well I know you explained it, but it doesn't make a lot of sense to me. As far as I'm concerned, what we signed up to do and what's in the Capital Improvement request... which isn't even funded, we've got \$2.5 million left over from the high school project. I don't know where the rest is supposed to come from. This spread sheet needs to reflect all 3 schools and then we need to see how to cut it down.

**Alderman McCarthy**

That's the purpose of doing the pre-construction phase. To go back to the spreadsheet, what we were initially provided with was the cost of the mechanical systems without any regard to what it will take to get it in there. And when Mr. Dubois took a look at that from a constructability standpoint, there's a lot of work taking out the building out from around the existing one and putting it back afterwards, that's not by its very nature including in the cost of the mechanicals.

**Alderman Teeboom**

Was that price you gave us delivered in a truck sitting in a parking lot? Or was that with some semblance of having it installed?

**Alderman McCarthy**

That's the cost to deliver and install it absent of everything else that needs to get done.

**Alderman Teeboom**

In your experience, you've been installing it before. When you're putting in a \$2.7 million system, how much more do you typically have to spend for odds and ends? What's the typical percentage you would add to \$2.7 million?

**Steve Caulfield**

Well, it can vary. The last job we did, started out with a mechanical replacement like this on a similar scope ended up being 4 times the cost of the mechanical system. Not from any work that we were doing, but because of what Mr. Dubois said. When we started putting in the mechanical system, we were taking out the ceiling. By that time we had to replace the lighting and the cost just went from there. The electrical to supply the mechanical to the electrical to supply the new lighting. So this is not unheard of and it depends which way you go. I want you to understand, don't look at this as a complete list. What I did to come up with list was to take some of the bigger items from the spreadsheet Mr. Dubois prepared to give you a sense of what was included. It's not comprehensive. We initially, in evaluating this project were trying to recreate with today's dollars what Rist-Frost had done in 2003 and give you a sense of what their replacement was in today's dollars as well as some other options. Neither one of those was intended to give you all these other costs. It was to give you a relative scale of replacing the mechanical systems. But always understanding that there were all these ancillary costs. Shawn was very forward thinking in bringing Carl in as early as he did, to try and identify some of these costs that we weren't even looking at, at that point. So it's not that the 3 of us got together and decided to make this project bigger. We decided to try and figure out what was in reality, involved in doing this project and what things were going to be affected by doing the work.

**Alderman Teeboom**

I have rough estimates too. Did they take into account conventional system... in suit replacement?

**Steve Caulfield**

Essentially the same as our system 1.

**Alderman Teeboom**

So as a reference point, \$3.7 million dollars. So the \$8.20 that you reference is up by 50%.

**Steve Caulfield**

The point being, Mr. Teeboom, that you've to be careful with analogies like that, because you may not be comparing apples to apples. There are numerous things that are within the estimate that I provided that may or may not have to be provided. You don't have to change the windows. We were asked to provide a price to change the windows.

**Alderman Teeboom**

Is the amount of stuff that you have to add in for Geo Thermal a lot more than for the in kind replacement?

**Steve Caulfield**

Yes.

**Alderman Teeboom**

Is the amount of stuff for Geo Thermal a lot more than Option 2?

**Steve Caulfield**

Yes.

**Alderman Teeboom**

So the amount of stuff you have to add to this system is more as you go up the options?

**Steve Caulfield**

Yes. And if you want to compare apples to apples, our system 1 is similar to what Rist-Frost had for \$3.75 million. We came out with about \$4.5 million not starting until next year and taking 3 years. The escalation over a 7-year period is pretty reasonable. The \$800,000 option is pretty much off the table at this point. But we use that as a reference point. The three mechanical systems were \$1.5 million to \$2.7 million per school, which for the 3 schools comes to \$4.5 to 8.1 million. Neither our report nor the Rist-Frost report were intended to include all the ancillary costs.

**Alderman McCarthy**

With regard to cabinets and pipe removal for the ventilators... we have to do that if we're going to do the base option of replacing the unit ventilators. Does option 2 include displacement air?

**Steve Caulfield**

Yes.

**Alderman McCarthy**

So, I presume if we did displacement, we'd have overhead ductwork with the ducts coming down in the corners to the diffusers?

**Steve Caulfield**

Yes, but you'd still have to put those under the windows and take out the cabinet, take out the pipe work and put new hot water piping in.

**Alderman McCarthy**

I'm wondering if there's a way to do that in a more superficial manner and simply leave the old unit ventilators capped in place and leave the piping in place so we don't have to remove the cabinets.

**Steve Caulfield**

Again, we're getting into the detail and I know the detail costs money. I think the approach that Mr. Smith has brought forward in terms of hiring a Construction Manager to really sit down and evaluate every option and bring it all to the table so all those decisions can be made. I'd like to say that in my estimate, I was looking at a worse case scenario. The concern of whether this will be a \$7 million project or a \$20 million project cannot be defined until everything is evaluated. So tonight the RFP would kick that off. In order to make this work within a year, we need to look further ahead than that. In June, when school is out this needs to start. And that means ordering equipment early on in late winter, early spring so you can get everything done in summer months. It's important that this process get going to meet a start date of next June.

**Alderman McCarthy**

Are those buildings wired with copper or aluminum?

**Carl Dubois**

That's got to be copper, based on the age.

**Alderman McCarthy**

I'm glad to hear that. When we're looking at things like electrical service, have we examined if we're going to do things like service upgrades?

**Steve Caulfield**

Yes, we have.

**Alderman McCarthy**

We now have several portable generators, we should make sure we have the facilities to hook those up.

**Mr. Dowd**

We were talking about doing this over a 3-year period, and outside of the aspect of having one of the boilers temporarily hooked up... there's an escalation every year... have you looked at the savings of doing the entire 3 schools in one year?

**Steve Dubois**

Based on the package that we prepared for Mr. Smith, we escalated the 2<sup>nd</sup> school by 5% and the 3rd school by a little over 7%. Again that is all part of the discussion, all part of the process.

**Mr. Smith**

We specifically looked at Fairgrounds. We looked at the student population there and talked to the principal about combining classes and giving up some space, etc. It would be tough to take what we put here and just apply to Charlotte and Ledge Street as well. We'd be biting off quite a bit if we tried to all three at once.

**Mr. Dowd**

I agree.

**Steve Dubois**

Through the design process, there would be discussions with the school principals about how much swing space they can provide us at a given time, so we can go in and renovate. All that is a function of dollars. That was my biggest concern when I first heard about this project. We need to bring forward something that is realistic in a time element and from a constructability element so that you can actually construct this without taking that school down. We don't need any more portables. So we're looking at all of that.

**Mrs. Ziehm**

I would like to commend you. I feel that you've done a very thorough job. Please don't take it personally.

**Steve Caulfield**

I don't take it personally.

**Mr. Dowd**

Would it be possible to get a copy of that PowerPoint presentation so I can give it to all the Board of Education members who aren't here this evening?

**Steve Caulfield**

Yes, Jim will copy it to his computer and will be able to distribute that.

**Alderman Richardson**

Why did you choose 10 years for the payback?

**Steve Caulfield**

We've worked with financing through vendors before with similar projects in order to find the funding for Geo Thermal projects. We found a vendor who offered to potentially finance it for other projects, and their terms were 10 years. So it was easy to incorporate their terms to evaluate the costs. But it could be re-evaluated for any length term.

**Alderman Flynn**

This project came up for discussion last fall, and I don't think I've changed my resolve. I think at that time we were concerned about boilers failing and schools not being able to be kept open in the winter. In the Capital Improvements plan for the last 2 years, there's been a request in to take care of this for the 3 schools. And that request was for about \$4.5 million. What was the school department's attempt if they had been granted that money? Based on what we're hearing tonight, it sounds like the project will cost, at a minimum, \$7 million. Where did that \$4.5 million figure come from? What were you really going to do with that, if the Mayor had put that in the budget?

**Mr. Smith**

I was taking at face value, the numbers I was first presented by Rist-Frost and then by HL Turner. That was the number I presented... I just went with it. Then as I started to take a more in-depth look at the project, that's when I became concerned that we weren't really capturing all the ancillary things. That's when I asked Carl to come along and fine-tune what those costs should be. So, what would we do with get \$4.5 million? To start with, we wouldn't do all 3 schools. I don't know.

**Alderman Flynn**

I think these were the same numbers that were presented by the previous CFO of the school department as well. To me, I've been sensitized to the value of doing this. But, I've sort of been lured in by one set of terms, and now the numbers are at a minimum doubled. So I'm naturally repulsed now, because the current is just so much higher than what I think we were told it was going to be. We had a handout that was given to us in January put together by Turner Building Science. Can anybody speak to some of those unfolded sheets as to what they are? I was looking at the base case, which was replacement in kind. Can you explain how the sub total for annual costs are calculated for any of those years? They don't add up, so there must be something else going on behind the scenes. That \$278,000 does not add up from the 2 numbers that are presented.

**Steve Caulfield**

You're right, and I don't know why.

**Alderman Flynn**

It's off like that for all 25 years and off like that on all 4-5 spreadsheets. Someone must have used a wrong formula and kept using it.

**Steve Caulfield**

Unfortunately I didn't prepare those sheets, so I can't answer that right now.

**Alderman McCarthy**

It looks like the annual costs actually include the gas costs twice.

**Alderman Flynn**

That's a pretty substantial cost. It's \$4 million out of the \$9 million of annual costs. There was also a sheet that showed the cost over 25 years for each one of these projects. I think the best case was for Geo Thermal, which might have been \$5 million over 25 years. It looked like the difference between that number and the next one up... one was \$5 million and the next was \$8 million. Do you remember that from your presentation?

**Steve Caulfield**

Yes.

**Alderman Flynn**

I think maybe it was really \$5 million and \$7 million. Was that based on today's dollars or is that including the 4.7 escalating energy cost over 25 years?

**Steve Caulfield**

I believe that's based on today's dollars.

**Alderman Flynn**

So if I take the difference and divide it by 25 years, the actual additional cost of Geo Thermal compared to system 1 is only \$80,000 more per year. It's like one person on the payroll. So is that one way to look at it for the actual cost of operating one school? \$5.5 million with the Cadillac and apparently \$7.4 million with some sort of lesser system? To me it's not a lot of savings, and it's a lot more bonding costs. And I still want an explanation of why these numbers don't add up on the spreadsheets and have you get back to us with that.

**Alderman McCarthy**

It is precisely twice the gas cost, so it's just an error on the sheets. My suspicion is that the formula that's supposed to generate that used the gas cost twice. The way the bond payment is typically done use declining interest payments.

**Alderman Flynn**

I think this is a project that we have to do. I think most of us had that \$4.5 million in our minds. But we have to find some way to make this affordable. We felt the shock tonight.

Alderman Teeboom moved to adjourn. **So voted at 9:50 p.m.**

*Submitted by Jacki Waters*