

Newtown Board of Education Virtual Meeting  
CIP/Facilities/Finance Sub-Committee Minutes  
November 11, 2020, 5:30 p.m.

**Call to Order:** The BOE CIP Sub Committee meeting was called to order at 5:31 by Mr. Delia.

**Participants:** Dan Delia, Chair, Sub-Committee, Tanja Vadas, Director of Business, Dr. Michelle Ku, Chair, Board of Education, Robert Gerbert, Director of Operations, Deb Zukowski, Sub-Committee & Board Member, Debbie Leidlein, Sub-Committee & Board Member, Dr. Lorrie Rodrigue, Superintendent, Allen Adriani, Sustainable Energy Committee

**Pledge of Allegiance**

**Item 1 Approval of October 13, 2020 BOE CIP Sub Committee Minutes**

Ms. Zukowski moved to approve the minutes of October 13, 2020. Mrs. Leidlein seconds the motion. All in favor. Motion passes.

**Item 2 Discussion of BOE CIP**

Mr. Delia stated the estimate for the Hawley project came in higher than on the CIP. Mr. Gerbert said the estimate is \$1M higher at \$6.3M over our \$4.2M estimate by RZ Design on the CIP. We are hopeful we can trim this down. He also stated that we have been going off the RZ Design estimate since February of 2019 which leads to questions on how accurate they covered everything. The estimate we have now and being on the high side has more detail in it.

Mr. Adriani stated a meeting is set with the Architect to review the scope of the work and the estimate. He stressed that the cost is high and they really need to break it up in two phases, where phase 1 would include the 21 wing with the electrical upgrade, and phase 2 would include the 47 wing and any additional classrooms that do not have a/c in the 97 wing. He also stated that Gordon Johnson from Building & Site, has experience doing cost estimating and is working on an estimate to double check Christopher Williams Architects estimate.

Ms. Zukowski asked to define more clearly and to articulate what it is we are hoping to address with this project. She also asked if we can come up with what we are trying to address in the future.

Mr. Gerbert stated the overall goal is to provide good ventilation for the building and that we need to look at the school in three different components; 21 section, 48 section and 97 section. The 97 section has a proper HVAC system. The 48 section is out dated. The 21 section has nothing. The 21 section looks like there was some passive systems based on how closets were arranged. But it now looks like those areas have been closed up. He indicated that the indoor air quality study came back with good and bad results. The good is the 97 and 48 wing, which is reasonable for CO<sup>2</sup> numbers. The 21 section showed several levels that were elevated. He said

this is nothing that would lead to concerns but when the levels start to get to 1,000 and up you want to look at the threshold. Some of the classrooms are 700-800-900 and those are rooms that need the most attention. Splitting the job up is good.

Ms. Zukowski wanted a follow-up on the concept of the variable air system and variable coolant system. She stated the choice was to go to the variable coolant systems. She then asked what are the trade-offs of the two systems other than the cost of installing them and accessibility.

Mr. Adriani said we choose the Variable Air Volume system (VAV) vs. the Variable Volume Refrigerant (VVR). He said we chose the VAV because it is more traditional, you have more standard components, and you can use a control system vs. the VVR system where you are locked into proprietary controls by that manufacturer. Plus, the current systems being manufactured now have a refrigerant that will be phased out in 2024. While the refrigerant will be available, the cost of the refrigerant if you have a significant leak could be higher over time. He further stated putting in a system that could be obsolete in 10 yrs. is not something we want to spend millions of dollars on vs. putting in a system that is more traditional such as what was put in the Sandy Hook School. With the VVR system each room would have a condensate pump which is high maintenance. If you get a leak you have the potential for black mold and it becomes a maintenance nightmare and causes problems over time. With the VAV system there are lower costs and it allows you to better ventilate the building for conditions such as COVID.

Ms. Zukowski stated this estimate is based on VVR. Mr. Adriani said they were originally going down the path of the VVR. Once we told them the option we wanted was the VAR, the engineer started working on it and was trying to get the estimate more aligned.

Ms. Zukowski asked if we are expecting a new estimate.

Mr. Adriani stated the Board of Finance wanted a budget back and it now looks like we have until November 30th to get a more accurate estimate.

Ms. Zukowski asked when they come back with the VAV system could it be higher.

Mr. Adriani stated unless you have all your equipment size and what the actual costs are then the cost will not be over the extra \$1M. He stated that is why we are doing a double check and it is still early in the game as they have not laid out the job.

Ms. Zukowski asked about the contingency amount.

Mr. Adriani stated their contingency for design is more than what we are currently spending for the design now, so something is wrong there.

Ms. Zukowski stated the \$425K has already been paid for and it should not be on there.

Mr. Gerbert stated he thinks they are going to err on caution and have an inflated number until they get closer on an exact cost. As we move in the process then we will see some of these costs drop off.

Mr. Delia asked what is the phasing premium?

Mr. Gerbert stated it is probably due to working in summer with the possibility of working at night or limited to working during school breaks which is not uncommon to add in additional money for second shift work, or, if the project has to be done at certain periods to avoid occupancy at the school.

Mr. Delia asked about the estimate and stated it was very confusing over some of the costs. Mr. Adriani stated he would be covering some of these costs in the meeting with the Architect. Mr. Gerbert stated he thinks we will see the number come down from \$6.3M, which we want to see get down to \$4.2M but even if it got down to \$5M it is still a more reasonable number than \$6.3M.

Mrs. Vadas stated going through the estimate she did not see labor costs. She asked at what point they can get closer in the number since we have a timeline.

Mr. Adriani stated we can give a number to the Board of Finance saying we are still refining the number and let the Legislative Council decide.

Mrs. Vadas stated the numbers are so escalated and some items are duplicated and asked how do you present that to the Board of Finance.

Dr. Rodrigue stated she is thinking about the timeline in this process and it's not that this was higher than we thought and they won't have a more accurate cost until they get closer to it. She asked if we were too late and should we have done this earlier? She further stated she does not want to get into a situation where we are barely making the timeline for the Board of Finance and as a result we may be splitting up a project that has been put off for a decade. She asked if it is a matter of timeline that we missed out on and what is the right balance of process. She further said we were pushed into getting an estimate from RZ Design 3 years in advance and they did not include a lot of things they should have.

Mr. Delia commented that we should have them review their estimate and present it to the Board of Finance and tell the Legislative Council that it will get refined further as the project gets closer.

Mr. Gerbert said it is a process where we do iteration after iteration. Usually a design process is 30%, 60%, 90% and we are probably at the 30% mark. Hopefully the next round is closer to 50%, and in December or January we will be at 90% with a higher confidence in what the number will be because the design is farther along.

Mr. Adriani stated in the estimate they included replacing all of the rooftop units for the 97 wing which we don't need to include as part of this project.

Mr. Gerbert said that is correct and we could pull that cost. He further said if we take that out and you pull out the associated percentage which is at 40%, that would be around \$300K in savings.

Mr. Adriani said the existing 97 wing went through more detail and was more like \$320K for the additional work; so it could be closer to \$400K that we could pull out of the estimate.

Dr. Rodrigue asked Mr. Adriani if it is typical to go in between the Board of Finance and the Legislative Council with numbers that go up or down along the way as a future process. She said when we do get to either Boards they want a pretty accurate number. She then asked is that typical meandering between the two and not having an accurate estimate?

Mr. Adriani stated the Board of Finance could be willing to pass it on with the understanding that a final of the estimate will come later on.

Ms. Zukowski stated she recalled by previous conversation that we would get a more defensible estimate by January 1<sup>st</sup>. She wondered if this number could halt the whole project again and put us in a much worse place. If VAR comes in more expensive then do you run it in two phases?

Mr. Adriani stated we will have to discuss this with the Architect and how to split it up.

Ms. Zukowski asked if this is an ongoing conversation.

Mr. Adriani said yes and we have to work with both the architect and engineers to determine a path forward to get the cost down. He stated this is not a one week process.

Ms. Zukowski asked Dr. Rodrigue, Dr. Ku and Mr. Delia if it comes down to the cost, and it is significantly over and above what is expected and could therefore causes problems, will the board and administration be in a position to vote on which approach to take?

Dr. Rodrigue said she believes under the CIP we have passed this on to the Board of Finance so we will go to them as to the actual cost and a better estimate but then it goes on to the Legislative Council. The approach however in splitting would be a discussion with the Architects, Building & Site and the Sustainable Energy Committee weighing in on a best course of action.

Mr. Adriani stated that is correct.

Dr. Ku stated this is a Public Building & Site project at this point. We have the Board of Education representatives. If there are educational issues or if the Board of Education wants to weigh in on the terms of splitting up vs. could we do without certain pieces of this project. We don't get to make those decisions at this point.

Mrs. Leidlein stated when the CIP is looked at we typically do projects over the summer when students are not in school, and getting numbers closer to that time is more advantageous but because we have to do it in the fall it does make this more challenging. She also stated in the past if there is a phasing of a project into two phases as opposed to one phase there is some escalation in the price because some things may have to be redone twice. She wondered if this is true in this situation?

Mr. Adriani stated if we split the project into two phases each phase would be lower but the total cost would be higher. We have to look at it and figure it out.

Mr. Adriani further stated if we budgeted at \$4.2M and do as much as we can for \$4.2M when we do the escalation, it is not as high when you ask for the money.

Mrs. Leidlein said she was disappointed that the bid came in as high as it did and she is anxious to hear outcome of the discussion with the Architect.

Ms. Zukowski stated it sounds like there would be two potential CIP projects; phase 1 plus electrical, and phase 2 would be a completely new CIP process.

Mr. Adriani said that is correct on two CIP projects.

Dr. Rodrigue thanked Mr. Adriani for pushing the timeline for us and his support was appreciated.

Mr. Adriani said we want to support you and make it work to see the whole project go through.

Dr. Ku also thanked Mr. Adriani for being at the meeting and sharing information with us. She shared a perspective on the Hawley project; she did a retrospective look back on the Hawley project and it has been split up and proposed on many different occasions and it has ranged from anywhere from \$3M to \$8M over the years and always done in different phases.

Ms. Zukowski stated she remembers it has always been on the CIP and asked has anything actually been accomplished on the building that was a portion of that project?

Mr. Gerbert said there was a climate study done which identified a number of projects for the school. The heating system has been done. He said we do have a state of art heating system, and it works great with high efficiency equipment, and good life expectancy.

The other part which still remains is the HVAC side.

**Public Comment:** No public comment

**Adjournment:**

Mrs. Zukowski moved to adjourn the meeting. Ms. Leidlein seconds the motion. All in favor. Motion passes and the meeting was adjourned at 6:15pm.

Respectfully Submitted,  
Joanne Morris

THESE ARE DRAFT MINUTES AND ARE SUBJECT TO THE APPROVAL OF THE BOE  
CIP/FACILITIES/FINANCE SUB COMMITTEE

Newtown Board of Education Virtual Meeting  
CIP/Facilities/Finance Sub-Committee Minutes  
October 13, 2020, 5:00 p.m.

**Call to Order:** The BOE CIP Sub Committee meeting was called to order at 5:06 by Mr. Delia.

**Participants:** Dan Delia, Chair, Sub-Committee, Tanja Vadas, Director of Business, Dr. Michelle Ku, Chair, Board of Education, Robert Gerbert, Director of Operations, Deb Zukowski, Sub-Committee Member, Debbie Leidlein, Sub-Committee Member, Dr. Lorrie Rodrigue, Superintendent, Allen Adriani, Sustainable Energy Committee, Kathy Quinn, Sustainable Energy Committee

**Pledge of Allegiance**

**Item 1 Approval of June 23, 2020 BOE CIP Sub Committee Minutes  
Approval of August 18, 2020 BOE CIP Sub Committee Minutes**

Ms. Zukowski moved to approve the minutes of June 23, 2020 and August 18, 2020. Mrs. Leidlein seconds the motion. All in favor. Motion passes.

**Item 2 Discussion of BOE CIP**

Mr. Delia began discussing the Hawley project and bringing in Allen Adriani and Kathy Quinn from the Sustainable Energy Committee. Mr. Adriani is the Chair of the Hawley project for the Public Building and Site Commission. The Board of Finance has asked numerous questions about Hawley and he wanted to discuss the timeline of the project. Mr. Delia stated when we talked about this project at the beginning we had a schedule put forward in July and he wanted to be sure we were staying on the timeline.

Mr. Adriani stated he had a schedule he received in August from the architect, the indoor quality air control consultant and the consulting engineer. His concerns were that we would not have bids back for the project until April. He believes we should have bids back before then or some kind of good estimate for the Board of Finance going forward. He also feels the Board of Finance will push back on this project.

Ms. Zukowski asked if we do not get the bids back before April then when would we need to cut checks to pay for the effort and would that be before or after July 1<sup>st</sup>.

Mr. Adriani stated this needs to go to referendum because of the dollar amount and you have to have an actual number before you can go to vote.  
Mrs Leidlein stated plus you have to walk it back to get all the paperwork printed. There is more to it than just having a number for a referendum date.

Dr. Rodrigue stated her concern is the timeline and we knew in advance when this issue would arise. The other piece is the air quality study that put us back because they needed to look at the building when we had students in them. When we went into hybrid model to start the year there was only 50% or less of occupancy. She thought the concern is with the timeline and with the bids. Mr. Adriani said if you play out the scenario when school started in September, you probably could have bids back in February or early March if you pushed hard enough.

Mr. Delia stated his understanding of that prior meeting was they would still get it done and stick to the timeline. He understands that we said October would be the construction estimate but if we pushed the estimate back until November wouldn't that still allow us to keep the CIP in place? Mr. Adriani said he recalled dates where he thought they would not have the bid packets available until April.

Mr. Gerbert said we were looking to have the construction documents by March 1s, and put the bids out on the street by April 1<sup>st</sup>.

Mr. Delia stated then we should be able to stick with this timeline and we should still be able to put a fair estimate in place for the referendum.

Dr. Rodrigue said they were not be able to do the study in the summer as there were no students. So she accepted the fact that we should push back a little bit but she was also under the impression that when we knew we were going to hybrid that the project was still going to move forward.

Ms. Zukowski stated she was of the understanding that the engineering study would have a reasonable estimate for the work and then bids would be sent out to actual construction companies who would then come in hopefully at or below that reasonable estimate.

Mr. Adriani stated we have a spread of 50% just on the HVAC project. You then have to factor in your hazardous work such as lead and asbestos. So to feel comfortable on going forward on the estimate he would refer to Mr. Gerbert to see if he is comfortable with the number. Mr. Adriani stated he would rather see the bids to know exactly what we are dealing with.

Mr. Gerbert said the number we are working off of is the number RZ Design provided us 18 months ago. They came to one of the Board of Finance meetings to talk about the two options. We had \$3.9M as the number and with discussion we then asked the question if they included any hazmat etc., which they said no. So we added more money to the account which got us to the \$4.199M. He said he did speak with the architect today to ask what he felt about providing an estimate. The response from the architect was they could provide an estimate in the line of a square foot unit type of estimate. Mr. Gerbert said that could get us in the ball park but it is not a tight estimate as if we had the full set put together.

Ms. Zukowski asked would that be the estimate on March 1<sup>st</sup> or would there be more to the estimate. She also asked what is the practice of the Board of Finance and if they need the actual number or, do they get the engineering study estimates and then work from that on the actual CIP and on the request for the appropriation.

Mr. Gerbert said a square foot or unit cost estimate is going to be very rough. If they have a full design set we could get a very tight number or close to 5% of the bid. The number they could put forward now would be very loose. The degree of confidence would not be very high compared to a full set. He said our best estimate is the full set put together when you have your units specked out which would be around March 1<sup>st</sup>.

Mrs. Leidlein stated her experience has been that there hasn't been a consistent process. Different projects call for different levels of numbers in order to have the Board of Finance approve. She has seen projects where we have come in with more detailed estimates and under budget, and projects where there is less detailed estimates and over budget. She asked in past consideration when putting numbers on the CIP where do those numbers come from and how do we arrive at those numbers based on information that we have from experts? We have discussed how that would look along with the price of going further for the estimates before deciding on the project and when the project would be done or not. She also asked how do you escalate that price without understanding and looking at the cost of waiting a longer time before you do that project and how do you escalate that cost in the CIP if you extend it another year? Some projects have gone so far down the road and resulted in a much higher cost. We have had to chunk the prices down in order to make the cost more tolerable. As long as she has been on the board this project has been on the CIP.

Ms. Zukowski asked if this was the case where we go out to bid prior to having the money? Mr. Delia stated we have to have the money if we put it out to bid and if we put it on the CIP at \$4.2M and it comes out to \$6M that could be a big problem.

Ms. Zukowski stated this is our best estimate, but we know that around March 1<sup>st</sup> we could have a better estimate at which time that number would replace this one.

Mrs. Leidlein stated no, not necessarily, because that number could replace this one but it could extend the timeline of the project which would add another year or more to the project and then that would escalate the cost of the project because you have to add on the cost of inflation. She said we have gone through this process and used numbers to bring forward and we need to seek numbers that are more timely for the project as it stands for the moment and that is what we have always done. She said we continue the process as we know it and tell the Board of Finance that this is the information that we have and this is our expectation for the timeline going forward and we hope everyone will move forward with us.

Dr. Ku stated she believes once the Legislative Council passes the CIP in January she does not think they can change the number after that. That is her recollection from the charter.

Dr. Rodrigue stated she does not remember previous projects of bid packages in that way. The whole reason we went to RZ Design was because the Board of Finance wanted a better estimate. We put all that effort into bringing them in so they could share with the Board of Finance. She said she is not sure why we are even here again because even with the month of hybrid that still would not have made this timeline work if we needed bids. January is the date for Legislative Council and they would not have the actual number either. She does not remember needing the



bids first. She understands the rationale but is pretty certain there were town projects where you can only get such a good enough estimate as you can until the project moves forward and you get the bids.

Mr. Adriani stated if you wanted to move forward he would not say no and was just cautioning. Even without an engineering estimate you have an RZ Design dollar amount but are they taking into consideration the indoor air quality, and hazmat and is the design apples to apples? He said we do not know. He then asked the question is the \$4.2M a plus or minus of 20%? What happens if you do come over that number and you find that out in March or April?

Dr. Rodrigue stated at the time RZ Design was an issue and that is why we had to add additional funds because they were lacking the air quality study in part and numerous things we pointed out that we would much rather have to make the estimate more solid.

Mr. Adriani stated they did not have structural and electrical consideration in their number and all of this adds costs. He asked if the \$4.2M become \$5M until you get a good engineering estimate and design?

Mr. Delia stated that would put us back a year and then do costs escalate over the course of that next year? Mr. Adriani said you can have the contractors put in an escalation figure.

Ms. Zukowski stated she does not understand that if you go out to bid and you get these bids isn't the assumption you actually have the money to spend? You can't go out to actual bid until you have appropriated the money. It seems like there is a catch. You go with engineering studies on an estimate and then appropriate that money and cross your fingers and hope that bids come in at or below. We need the engineering study and we need that estimate and can we get something to make this number more reasonable by January 1<sup>st</sup> when the Legislative Council has to settle on a price?

Mr. Adriani asked Mr. Gerbert if we could get a number by January. Mr. Gerbert said yes. He does not think it would be a 99% confidence number but it could get us a 90% number. They will have the number of units back by then and a better idea of indoor air quality results. They will be much further along in the process in January.

Mrs. Leidlein asked Mr. Gerbert about historical data with air quality reports. He replied that he thought they were maybe 10-15 years old and stated they are doing an air quality report this week. He indicated as part of this we were able to get them to agree to do two of them with one this week and one in a month from now, and compare numbers to be sure there are no differences.

Mrs. Leidlein asked if you are talking about two different times for the air quality study will there be a difference from windows being opened now vs. in a month from now?

Mr. Gerbert said we are on the tip of the heating season. We have asked the school to keep the windows closed in order to get good data so that it does not have an adverse effect on the

numbers. Getting 100% cooperation could be difficult. We asked for the second one in November as at that time all the windows will be closed.

Mr Adriani said the infiltration rate will be different from October to November and that will impact the numbers.

Mr. Delia stated he thought we are good then where we are. We are going to push them to have an estimate by the end of December.

Mr. Gerbert said he talked with the architect today and would follow up at the end of the week based on the meetings tonight. We will be looking for a number and asking him to give us a square foot cost now and they can hone that number in over the next 8-10 weeks and we can see how that number changes.

Mr. Delia stated that the issue is resolved as far as he is concerned and asked if everyone else if they were comfortable with that. Everyone agreed.

Mr. Gerbert talked about the high school air conditioners and that everyone should be aware that there have been tours throughout the schools with Sustainable Energy members, Board of Education members, Fred Hurley and himself to view and get an understanding of what kind of equipment is at the buildings, areas of improvement, whether its HVAC, windows, plumbing, roof etc. He said as of now we have completed two schools; the High School and the Middle School. This week they will go through Hawley, and we will continue this process as we make our way through the rest of the schools. So far the process has been good. People have brought up some good observations of the two buildings we have been through. He said it's a good exercise to not only do now, but perpetually keep this moving. These projects will come and go and there will be new issues that develop over time and it is a good sign to show other town boards that we are working together and everyone is going in the same direction and agreeing on projects while moving forward and looking at the big picture.

Mr. Delia thanked Mr. Adriani and Ms Quinn for coming to this meeting and he said it is important that we work together. He also stated it's important that we look at the big picture and making decisions on the whole. He wants to make sure that we set up a system of reviewing projects, touring schools, looking at the whole and making sure we are rating projects appropriately.

Mr. Adriani said he sent Mr. Gerbert an excel spreadsheet of benchmarking tools. Mr. Gerbert presented the spreadsheet and stated this is a tool on how to rank your projects for importance. The spreadsheet is a ranking system and is something we can use as a template and build off of. It has different ratings such as 'risk of failure', energy savings, safety, etc., which by using these tools will help to rank and prioritize projects with a scoring. He went further to describe the spreadsheet.

Mr. Delia stated it's important to maintain a perspective as well and not to just dive in using these tools. We have not seen all of the schools so when we start to utilize this document we

need to have an overall picture and that is something we have to always keep in mind and that this is just the beginning.

Mrs. Leidlein asked about how affordability plays into this and if we have the ability to adjust a larger project to another year and what can we afford to spend based on what the town projects are. She also asked where we are to larger projects and is there flexibility that comes into play with regards to availability of dollars.

Mr. Adriani said it ranks in priority to how you should move forward with projects. There is a tab called capital improvement plan and we can modify this to a 10-15 year plan. You can go through the priority list and pick and choose your high ranked projects and make it fit into the dollar amount.

Mr. Gerbert said this is a template and a first pass. We can add other criteria into the spreadsheet. We can change or add criteria and get it to a place where everyone is comfortable and to use this to help us in making further decisions on projects.

Mr. Adriani asked the question how do we prioritize the Hawley HVAC over other projects?

Mr. Gerbert said we have 5 buildings we need to do a walk through.

Mr. Adriani stated the only school he has not walked is Reed.

Mr Delia asked if it is fair to make that call if we have not walked through all of the buildings.

Mr. Adriani is afraid someone will ask which is the higher priority, if we have older units in other schools. He then asked should we be paying attention to those vs. putting in HVAC into a school that doesn't already have it.

Ms. Leidlein stated we talked about this project for a long time. She thinks the criteria on this spreadsheet isn't the entire criteria that has been discussed over time as to why this is an important project. Part of it is the indoor air quality which has been discussed and the data looked at. She said a lot of the importance of this project has been the fact that there is an inability in the school particularly in certain areas of the school to allow for ventilation in the same way that you might allow in other schools because of the proximity to a main road and because of sound, exhaust, and the fact that it does impact student learning. The impact to the students who are particularly in that front area of the school are impacted because of the fact there is no allowance for ventilation and you have the multiple floors which impacts the heat. That has always been part of this discussion with this project.

Ms.Zukowski asked how extensive is the Middle School HVAC that exists right now. Mr. Gerbert says it is spotty. There are 6 rooftop units, a number of split systems like the cafeteria, main office, health suite, library, a bank of classrooms behind the a-wing gym.

Ms. Zukowski then asked how much HVAC is there in Hawley.

Mr. Gerbert said only the 97 wing has HVAC coverage. In terms of the Middle School, they only have 3 or 4 classroom that have air conditioning. In all of the other classrooms you have nothing. In terms of Hawley it's the same thing only its older.

Dr. Rodrigue stated she loved the idea of being able to quantify and prioritize but she thought the spreadsheet was missing some things, one being the learning environment. She indicated she doesn't know if any of the criteria captures that. She said she is nervous that we have already put this information into this format and if this goes forward to other boards they might determine that our projects are not in the right priority. This is the first time she has seen this.

Mr. Delia stated he agreed. This is the very beginning of this process.

Mrs. Leidlein stated she agrees this is a great tool. We need to consider this and with the fact that the Board of Education is in the business of teaching and learning, we need to make sure we have the best optimal environment possible for student learning.

Mr. Delia stated one criteria we would want to add to this spreadsheet is the impact on learning.

Mr. Adriani stated we can add any criteria we want to this spreadsheet.

Mr. Delia stated we need to discuss this more. Mr. Gerbert said this is a first pass and this is a template we can modify it into a more organized format.

Mr. Delia stated we would add this to the next agenda and continue this discussion.

Ms. Quinn stated we should look at modifying this sheet where it needs to be and adding the various criteria, but to get through the rest of the tours as soon as possible so we can input that information as well, which will then give us a total and a picture of where we are at with all of the buildings.

Mr. Delia stated we are grateful for the Sustainable Energy Committee's support and the input that their Board is offering to us to help us make the best decisions.

Ms Quinn stated we want to make sure we are working on the same page and heading for the same goals, and doing what we should be doing in the order it should be done. There are other things that we are doing that hopefully will help to bring down your expenses which would require you to not have to do that much.

Mr. Adriani and Ms. Quinn left the meeting at 6:15.

## **Item 2 Budget vs Actual Projected Expenses**

Mrs. Vadas presented a 2020-2021 COVID expense sheet (attached). She stated she added an anticipated encumbrance and expense column to the spreadsheet which was a great way to capture all of these costs. Currently our bottom line of costs to date is \$1.7M but she also wanted to point out that there were other areas that we are seeing also. In the facilities area we are somewhat stabilizing as we have a lot of the PPE (Personal Protective Equipment) costs in. She further said areas that are increasing that are not on this sheet are support staff hours, teachers covering other teachers that are out, increases in certified staff, and increases in SpEd services such as BTs, one-to-ones, and on-line speech services. These are areas that will be evolving as we go. Other areas that she has not been able to capture is unemployment costs. This is something to think about. We have budgeted \$30K for unemployment costs but she indicated she has a feeling that number will skyrocket.

Mrs. Vadas also talked about the continuation of the Seamless Summer option that is going on at the high school. That number has not been included yet as she is still getting estimates from Whitsons. This number is where the high school students receive a free breakfast and free lunch.

Dr. Rodrigue said there was a little bit more of a cost for that since Whitsons had to pay a bit more for the high school vs K-6 because the high school is not on the NSLP program. She said this free lunch was for every student and we had to pay more to allow all of our students K-12 to have the free lunch option because you could not say the high school could not be on it. She further said the Seamless Summer Program is paying Whitsons the dedicated amount so they would not be losing money. We had to pay for that time period. She indicated that you can't just say some of our students are receiving a free lunch and some are not.

Mrs. Vadas stated the Seamless Summer program is a state funded program and is a COVID related cost but it is not on the expense sheet right now.

Mr. Delia asked if the \$256K is where we are at now.

Ms. Vadas stated that this sheet was printed a few days ago and is now at \$316K and going up daily. She indicated we are still looking at costs as far as teachers and support staff that we are anticipating now but not in the beginning.

Ms. Zukowksi wanted to understand what is meant by anticipated. She asked if it means we say we have this problem that we know of today and that we know we will have to cover in the next small amount of time.

Mrs. Vadas said that is correct and these costs are all encumbered so they are either on a purchase order or encumbered through the salaries except for the custodial overtime and that she has put together another spreadsheet based on the last salary run and adjusts that when needed.

Ms. Zukowski asked if it was possible to add possible exposures like things that are not on the list that could come back.

Mrs. Vadas said that is what she is trying to do. She said she can add something to the sheet as to what they are looking at or thinking about for future needs.

Dr. Rodrigue stated there are things that are COVID related for this year and may turn into something that we need in the future anyway. For example, there are some personnel costs that we are looking at because of the student apps and in order to support those students above and beyond what we currently have in the system. This does not mean it is over at the end of the year, this could continue and need to be budgeted for in the following year as well.

Mrs. Vadas stated the grant was submitted for the \$380K and has been approved. We have identified all of those costs and the accounts they are in and are ready to move that over to the grant. The \$400K is also ready for us to use. The next step would be to move the \$380K out of the General Fund and into the grant and then start identifying where we want to use the \$400K. She stated we are not ready yet to use the \$400K as we cannot use it for personnel. We want to

make sure once we use the \$380K we see where we are. We have more costs coming in and the next round will give us a better picture of where to spend the \$400K.

Mrs. Vadas said the chromebooks are going to be the big expense. We can see where we are at with other items and hold onto that until we incur more costs.

Mr. Delia stated at the next board meeting we will bring forward to move the grant money over. All agreed.

Dr. Rodrigue left the meeting at 6:28.

### **Item 3 Discussion of Virtual Net Metering**

Mrs. Vadas presented a spreadsheet of credit and billing for the virtual net metering (attached). She stated this is one of those sustainable energy projects where we did nothing and we are receiving credits.

Mr. Delia stated they are big credits and Mrs. Vadas said there offsets. She stated there is a lot of catch-up going on right now. The credits are from January through September and we have two hosting meters. The offsets to these credits is a developer fee which she has one bill currently for one of the set of credits. The bill is \$81K. The second bill is estimated and is still to come in for \$91K. Right now we will have a net credit of \$125K. The other piece to this puzzle is the investment (developer) fee to invest in this project. Right now as of September we owe them \$61K after all of the debits and credits go through. From September to January/February 2021, she estimated in about 4 or 5 months we will be back in the credit state against our Eversource bill. It's a lot of catch-up right now and by the end of January or February we will break even. She is working on estimating what our credits would be in the future. The bottom line is she is estimating an average of \$10-15K credit on our high school electrical bill every month. And again we did not have to do anything for that. What we know now is on this sheet.

Mr. Delia said presenting this to the full board has been a positive and a good for the schools and community.

Mr. Gerbert stated there is more to come as there will be another spike coming on-line that will pick up other schools so this is just the first wave.

Mr. Delia said we would review this in a few months and Mrs. Vadas indicated she would include this in the electrical costs.

### **Item 4 Waste Water Testing Discussion**

Ms. Zukowski stated this all started with an article about the University of Arizona where they were doing waste water testing for COVID. They were able to identify the presence of COVID in a dorm and from there they tested everyone in the dorm and found two asymptomatic students. They were then able to isolate the two students and keep the dorm open. She said there is a certain amount of interest in whether or not it might make sense for other organizations such as Yale working with New Haven and Univ. of CT. They are looking at their dorms and the question would be whether or not it would be feasible to actually add it on a per school basis.

What is it that we would need to have or exist to make this waste water testing possible. In Az and at Uconn they are doing dorm by dorm.

Ms. Zukowski asked two questions: Do we have buildings that we could have actual sample waste water effectively from, and if we could, what would it cost to retrofit those buildings with that type of a pump.

Mrs. Leidlein stated the question is then, if these are universities and they have positive results come back from the sewage water tests then are they able to test the population of whatever building or scope that is? She also asked are we able to test our population or do we count on the parent body to test the population and if that is the case what does that look like? We could make a recommendation but there is no guarantee that it would play itself out.

Ms. Zukowski stated she contacted Donna Culbert who found it intriguing and that she would be talking with Yale. Ms. Zukowski also asked if it is even feasible that our buildings would be able to do this based on cost and functionality. From a public health standard is it feasible from a testing perspective to actually be able to leverage the results you might get from a system?

Mrs. Leidlein stated she does not see how as a school district we could test everyone in a school and if we did what would be the next step.

Ms. Zukowski stated the next step would be to quarantine the school.

Ms. Leidlein asked if we know what the accuracy of these tests are.

Ms. Zukowski said those questions would be answered better by the Dept of Public Health. She further asked if we could look into it and if public health comes in and says this could really help the virus from spreading that we are ready to go or we know ahead of time if we can do it functionally or if we can't afford to do it.

Mr. Delia asked if we should be discussing this with Donna Culbert and the Health Dept.

Ms. Zukowski asked Mr. Gerbert if it was possible to test waste water from each of the schools. If the answer is no then there is no going forward. The second question is how much would it cost to retrofit for those tests and an estimate of an overall cost of testing once a week or so.

Mrs. Vadas said once you have the data how would you go about testing the school and how would you collect the data?

Ms. Zukowski said the minimum you could do is shut the school down for two weeks to stop the spread.

Mrs. Vadas did not think we should go that route.

Mrs. Leidlein stated we need more information before we can go further with this conversation. We need more information and do more research into the accuracy of the tests and the outcomes of levels and know what the potential ramification is, etc. If this needs to be the road we go down, we need more of a collaborative committee that includes public health, school district, and any other committees within the system.

Ms. Zukowski said that maybe as a committee we could bring this up as an option at our next board meeting.

Mr. Gerbert said yes, we can make it accessible to collect but his thoughts are that this would have to come from the Dept. of Health in coordination with the state, and parents would have to be on board with this happening.

Mrs. Leidlein stated maybe the next step with this before we even determine we need to bring before the board is for the Superintendent and the Director of Public Health and possibly the Director of Facilities to see if this is a path we want to go down. Because there are so many protocols in current place with testing, and contact tracing, she indicated she would want to better understand all that works together with this idea.

Ms. Zukowski said she would see if she could engage the Superintendent in this conversation and do a follow up with Donna Culbert.

Mrs. Leidlein asked if there is any additional information with doing research on the topic. It would be helpful for us to see a variety of statistics and different studies and types of information to look at.

**Public Comment:** No public comments

**Adjournment:**

Mrs. Leidlein moved to adjourn the meeting. Ms. Zukowski seconds the motion. All in favor. Motion passes and meeting was adjourned at 6:59pm.

Respectfully Submitted,  
Joanne Morris

THESE ARE DRAFT MINUTES AND ARE SUBJECT TO THE APPROVAL OF THE BOE  
CIP/FACILITIES/FINANCE SUB COMMITTEE



NEWTOWN BOARD OF EDUCATION  
SUMMARY - CAPITAL IMPROVEMENT PLAN  
2021/22 TO 2025/26

Approved by the Board of Education  
on 7/7/2020

INITIAL FIVE YEARS

CIP Item #	Location	Description of Project	Year 1	Year 2	Year 3	NO BONDING Year 4	Year 5	TOTALS
			2021/22	2022/23	2023/24	2024/25	2025/26	
1	Hawley Elem.	Ventilation, HVAC Renovations	\$4,199,720	\$0				
8	Hawley Elem.	Generator - 80KW <i>(whole school reduced to essential components only)</i>				\$0	\$250,000	\$4,449,720
9	Middle Gate Elem	Energy Project window modifications				\$0	\$1,000,000	\$1,000,000
6	Head O'Meadow	Boilers, water heater, VFD & pump replacements with LED lighting			\$850,000	\$0		\$850,000
3	Reed Intermediate	Install high efficiency gas boilers & LED lighting conversion		\$1,539,894	\$0			\$1,539,894
4	Middle School	Engineering for ventilation and A/C renovations		\$300,000	\$0			
5	Middle School	Ventilation, HVAC, Auditorium, Media center, replace rooftop units '98			\$3,782,228	\$0		\$4,082,228
2	High School	Replace/restore stadium turf field & track <i>(11th year)</i>	\$795,000	\$0				
7	High School	Create turf practice field rear of school					\$1,100,000	
-	High School	Rear Practice fields facilities and storage <i>(moved back one year)</i>					\$0	
TOTAL COSTS OF ALL PROJECTS			\$4,994,720	\$1,839,894	\$4,632,229	\$0	\$2,350,000	\$13,816,843
TOTAL TO BE BONDED			\$4,994,720	\$1,839,894	\$4,632,229	\$0	\$2,350,000	\$13,816,843

Previous BOE approved CIP amounts (November 6, 2019)	\$4,712,000	\$1,752,730	\$4,565,812	\$2,000,000	\$2,504,000	\$15,534,542
Difference to previously approved plan	\$282,720	\$87,164	\$66,417	-\$2,000,000	-\$154,000	-\$1,717,699

Eligibility for project inclusion on the CIP is that the cost must exceed \$200,000.  
2017-18 Reimbursement rate 36.43%

Construction inflation estimate 6.0%

**NEWTOWN BOARD OF EDUCATION  
SUMMARY - CAPITAL IMPROVEMENT PLAN  
2026/27 TO 2030/31**

**Approved by the Board of Education  
on 7/7/2020**

**SECOND FIVE YEARS**

CIP Item #	Location	Description of Project	Year 6	Year 7	Year 8	NO BONDING Year 9	Year 10	TOTALS
			2026/27	2027/28	2028/29	2029/30	2030/31	
	Hawley Elem.	Classroom renovations '21 section (ceilings, lighting, floors, etc.) Repave entire parking lot, curbing, sidewalks Elevator to café	\$318,000	\$1,011,240 \$0	\$0 \$1,378,000	\$0		\$2,707,240
	Sandy Hook							\$0
	Middle Gate Elem	Repave entire parking lot, curbing, sidewalks Complete kitchen renovation Ventilation, HVAC Renovations		\$1,378,000	\$0 \$397,500	\$0	\$300,000	\$2,075,500
	Head O'Meadow	Replace/update A/C Re roofing/restoration		\$2,696,640	\$6,179,800 \$0	\$0		\$8,876,440
	Reed Intermediate	Repave entire parking lot, curbing, sidewalks Re roof entire building (solar remove & reinstall \$225K)	\$3,710,000	\$2,120,000 \$0	\$0			\$5,830,000
	Middle School	Repave entire parking lot, curbing, sidewalks Window replacements (front of building) Library and science lab renovations Complete kitchen renovation	\$795,000	\$3,710,000 \$0	\$1,685,400 \$0	\$0	\$1,000,000	\$7,190,400
	High School	Re roofing/restoration HVAC equipment replacements Athletic/Stadium field house and storage Rear Practice fields facilities and storage <i>(moved back one year)</i>	\$2,921,360 \$954,000 \$0	\$0 \$1,685,400	\$0	\$0	\$5,300,000	\$10,860,760
<b>TOTAL COSTS OF ALL PROJECTS</b>			<b>\$8,698,360</b>	<b>\$12,601,280</b>	<b>\$9,640,700</b>	<b>\$0</b>	<b>\$6,600,000</b>	<b>\$37,540,340</b>
<b>TOTAL TO BE BONDED</b>			<b>\$8,698,360</b>	<b>\$12,601,280</b>	<b>\$9,640,700</b>	<b>\$0</b>	<b>\$6,600,000</b>	<b>\$37,540,340</b>



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**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

6-Nov-20

*Prepared by:*  
**MEP Cost LLC**

*For:*  
**Christopher Williams Architects, LLC**



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**  
Gross Floor Area (sf): 62,921  
Date: 6-Nov-20

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**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
Date: 6-Nov-20

**Basis of Estimate**

**Gross Floor Area:**

Basement	8,733	sf
First Floor	35,508	sf
Second Floor	18,680	sf
<b>TOTAL</b>	<b>62,921</b>	<b>sf</b>
<i>Attic</i>	5,248	sf

**Information used in preparation of estimate:**

Basis of Design Narrative Draft Report dated Oct. 24, 2020 by BVH Integrated Services  
Photos of existing conditions provided by Christopher Williams Architects LLC  
2012 Boiler Replacement project drawings  
2005 HVAC Repairs drawings  
Information received through emails, and in telephone discussions with BVH and CWA



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
Date: 6-Nov-20

**Clarifications & Exclusions**

**Clarifications:**

The estimated construction duration is 4 to 6 months.

As construction is desired to be performed during summer and other breaks, the estimate includes a 10% phasing premium, to account for multiple mobilizations/demobilizations, temporary services/connections/reconnections, etc.

This estimate is based on the use of a VRF (variable refrigerant flow) HVAC system.

If a VAV (variable air volume) system is desired rather than a VRF system, we expect a cost premium in the order of \$ 1 million due to the larger ducts, and more extensive duct distribution that would be required in the ceiling spaces for a VAV system.

The estimate is based on prevailing wage rates for construction in this market, and represents a reasonable opinion of cost. It is not a prediction of the successful low bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, a lack of or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors.

**Exclusions:**

Costs associated with the following items are **NOT** included in the estimate:

- code upgrades (eg: building, seismic, fire alarm, fire protection, life safety, etc).
- firesafing of any existing penetrations.
- roof warranty extension (after repairs/patching for HVAC upgrade work).
- state sales tax.
- soft costs (design fees, bldg permits, etc).



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
 Date: 6-Nov-20

**ESTIMATE SUMMARY**

Description	\$/sf	Total
<b>General Requirements</b>		
01 General Requirements	0.82	51,461
<b>Facility Construction</b>		
02 Existing Conditions	5.39	339,326
03 Concrete	0.08	5,000
04 Masonry	0.11	6,720
05 Metals	0.56	35,120
07 Thermal and Moisture Protection	0.75	47,500
08 Openings		
09 Finishes	3.02	190,081
10 Specialties		
<b>Facility Services</b>		
23 Heating Ventilating and Air Conditioning	48.88	3,075,566
26 Electrical	8.05	506,686
<b>Site and Infrastructure</b>		
32 Exterior Improvements		
33 Utilities		

<b>Sub-Total:</b>	67.66	<b>\$ 4,257,460</b>
Design & Pricing Contingency	10.00%	425,746
Construction Contingency	3.00%	140,496
Insurance (General Liability & Workers Compensation)	2.00%	96,474
Performance and Payment Bond	1.00%	49,202
General Conditions/Overhead/Profit	12.50%	621,172
Escalation - to June 2021 @ 6% per annum	3.00%	149,081
Phasing premium	10.00%	573,963

<b>Total Construction Cost:</b>	100.34	<b>\$ 6,313,595</b>
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**ADD Alternates:**

Provide insulation at existing attic	\$	28,100
Remove & replace existing cabinet unit heaters in classrooms with new	\$	95,900



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
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Description	Quantity	Unit	Unit Cost	Total
<b>GENERAL REQUIREMENTS</b>				
<b>01 GENERAL REQUIREMENTS</b>				
<b>Temporary Facilities &amp; Controls</b>				
Dust control (place & remove, cleanup, removal od demo'd materials), moving desks & chairs / floor protection	62,921	sf	0.50	31,461
Dumpster, 2 pulls per month	1	ls	5,000.00	5,000
Cut & patch site surfaces for new incoming electrical service	1	alw	15,000.00	15,000
<b>Temporary Facilities &amp; Controls</b>				<b>51,461</b>
<b>TOTAL GENERAL REQUIREMENTS</b>				<b>\$ 51,461</b>

**FACILITY CONSTRUCTION**

**02 EXISTING CONDITIONS**

**Removal and Salvage of Construction Materials**

Demo ceilings for installation of refrigerant piping, electrical wiring, duct, etc	16,413	sf	2.00	32,826
Cutting block walls for new ductwork distribution across corridor	56	ea	300.00	16,800
Core drilling of block walls for new piping/conduit distribution across corridor	140	ea	130.00	18,200
Cut hole through floors for new ductwork and piping, app 2'x2'	8	ea	1,000.00	8,000
Cut holes in walls/floors for installation of new elec panelboards, conduits, refrigerant piping, condensate drain piping, ducts, etc (NOTE: lead based paint on walls in 1921 & 1948 areas)	1	alw	15,000.00	15,000
Cut openings in roof for new steel column extensions (or ties to beams) for support of new DOASs/RTUs	40	ea	500.00	20,000
Cut holes in roof for ducts from new RTUs/DOASs	10	ea	1,500.00	15,000
Cut holes in roof/structure for elec feeders to mech equip, refrigerant piping & heating piping for DOASs/RTUs	12	locns	1,000.00	12,000
Dunnage for roof mtd condensing unit	5	ea	1,000.00	5,000
X-ray of floor/roof slabs in 1921 areas before coring/cutting holes	1	alw	4,500.00	4,500
<b>Removal and Salvage of Construction Materials</b>				<b>147,326</b>

**Facility Remediation**

Spot Lead Abatement for cutting block walls x corridor	56	ea	250.00	14,000
Spot Lead Abatement for core drilling x corridor	140	ea	100.00	14,000
Small Asbestos Abatement for 2x2 duct holes in floor	8	ea	2,000.00	16,000
Spot Lead Abatement for piping/conduits	500	ea	50.00	25,000
Spot Asbestos Abatement for piping/conduits	100	ea	50.00	5,000
Cleaning of Attic & sealing	1	alw	10,000.00	10,000
Vinyl Floor Tile abatement in 2 Electrical Rooms	2	ea	3,500.00	7,000
Abatement of hidden asbestos pipe insulation in way	10	ea	2,500.00	25,000
Abatement of asbestos caulk at 1921 doors	50	lf	20.00	1,000
Trim trees that overhang roof	1	alw	10,000.00	10,000
Asbestos transport & disposal	1	alw	5,000.00	5,000
Lead paint transport & disposal	1	alw	5,000.00	5,000
PCB transport & disposal	1	alw	5,000.00	5,000
3rd party testing & monitoring	1	alw	50,000.00	50,000
<b>Facility Remediation</b>				<b>192,000</b>





**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**  
 Gross Floor Area (sf): 62,921  
 Date: 6-Nov-20

	Description	Quantity	Unit	Unit Cost	Total
	<b>Transportation and Disposal of Hazardous Materials</b>				
	Hazardous materials transportation & disposal / fees - by owner				<i>not included</i>
	<b>Transportation and Disposal of Hazardous Materials</b>				
	<b>TOTAL EXISTING CONDITIONS</b>				<b>\$ 339,326</b>
<b>03</b>	<b>CONCRETE</b>				
	<b>Cast-in-Place Concrete</b>				
	Patch/cover/seal openings in roof for demo'd exhaust fans	1	alw	5,000.00	5,000
	<b>Cast-in-Place Concrete</b>				<b>5,000</b>
	<b>TOTAL CONCRETE</b>				<b>\$ 5,000</b>
<b>04</b>	<b>MASONRY</b>				
	<b>Brick Masonry</b>				
	Modifications to exist CMU walls to support steel beams	56	locns	120.00	6,720
	<b>Brick Masonry</b>				<b>6,720</b>
	<b>TOTAL MASONRY</b>				<b>\$ 6,720</b>
<b>05</b>	<b>METALS</b>				
	<b>Misc Metals</b>				
	Misc metal angles at openings in floor & roof for new shafts for duct & pipe risers	1	alw	20,000.00	20,000
	Add steel beams to support of new rooftop units (3) w10x12 per unit @ 12'	2	ton	10,000.00	15,120
	<b>Misc Metals</b>				<b>35,120</b>
	<b>TOTAL METALS</b>				<b>\$ 35,120</b>
<b>07</b>	<b>THERMAL and MOISTURE PROTECTION</b>				
	<b>Roofing</b>				
	Re-roof/patch at new RTU curbs	6	ea	2,500.00	15,000
	Patch openings in roof for demo'd refig piping	2	ea	500.00	1,000
	Roof protection/walkways for removal of exist 1997 RTUs & installation of new condensing units, DOASs & RTUs	1	alw	10,000.00	10,000
	Provide new 2" thick conc pavers to/from cond units & DOASs	1,000	sf	3.00	3,000
	Flash & patch hole in roof for elec feeders to mech equip, refrigerant piping & heating piping for DOASs/RTUs	100	sf	30.00	3,000
	Roof patching/flashings after installation of curb adaptors for replaced RTUs in 1997 area	6	ea	500.00	3,000
	Roof patching/flashings after new RTU/DOAS curbs & duct penetrations installed	7	ea	500.00	3,500
	Remove 3 windows in attic, replace w/metal louvers app 3'x5'	3	ea	3,000.00	9,000
	<b>Roofing</b>				<b>47,500</b>
	<b>TOTAL THERMAL and MOISTURE PROTECTION</b>				<b>\$ 47,500</b>



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
 Date: 6-Nov-20

	Description	Quantity	Unit	Unit Cost	Total
<b>09</b>	<b>FINISHES</b>				
	<b>Gypsum Board</b>				
	Build new pipe/duct enclosure/shafts through 2nd floor, assume 2-2'x2' pipe shafts & 3-3'x4' duct shafts, including bulk heads. Includes bulkheads at new suspended ceilings	1,600	sf	25.00	40,000
	<b>Gypsum Board</b>				<b>40,000</b>
	<b>Ceilings</b>				
	Add new drop ceiling to rooms with no existing drop ceiling	3,130	sf	6.50	20,345
	FULL - replace demo'd T-bar ceiling grid & tiles for installation of refrigerant piping, ductwork, control wiring, electrical wiring, etc	16,413	sf	6.50	106,685
	PARTIAL - Remove & replace T-bar ceiling tiles for installation of refrigerant piping, ductwork, control wiring, electrical wiring, etc	2,524	sf	3.50	8,834
	Replace 25% of removed ceiling tiles due to breakage after removal for HVAC upgrade	631	sf	3.50	2,209
	Replace 25% of T-bar ceiling grid damaged during HVAC upgrade and/or for installation of ductwork	631	sf	3.50	2,209
	<b>Ceilings</b>				<b>140,281</b>
	<b>Painting and Coatings</b>				
	Paint new gyp bd bulkheads & shafts	1,200	sf	4.00	4,800
	Allowance for touch up of wall/surface areas damaged during HVAC upgrade & after demo of split system AC units	1	alw	5,000.00	5,000
	<b>Painting and Coatings</b>				<b>9,800</b>
	<b>TOTAL FINISHES</b>				<b>\$ 190,081</b>

**FACILITY SERVICES**

**23 HEATING VENTILATING and AIR CONDITIONING**

**Heating**

	Existing heating water plant, pumps, exp tanks, air separators, piping, perimeter finned tube radiation, etc				<i>ETR</i>
	Connect to exist heating water lines	12	ea	453.56	5,443
	Cabinet unit heater, hot water (for 1921 area C)	2	ea	2,210.00	4,420
	Heating water piping, avg 2" dia (for DOAS & RTU heating coils)	700	lf	59.31	41,517
	Heating water piping, 3/4" dia (for cabinet unit heaters)	50	lf	28.10	1,405
	Heating water piping, 3/4" dia (for VAV box reheat coils)	60	lf	28.10	1,686
	Local heating water piping rough-in & conn at DOAS heating coil	5	ea	2,631.09	13,155
	Local heating water piping rough-in & conn at RTU heating coil	2	ea	2,631.09	5,262
	Local heating water piping rough-in & conn at new CUH	2	ea	1,164.59	2,329
	Local heating water piping rough-in & conn at VAV box reheat coil	3	ea	1,407.84	4,224
	Valves & specialties (thermometers, pressure gauges, test fittings, air vents, flex pipe conns, access panels, drain pans, backflow preventors)	1	ls	6,700.00	6,700
	Pipe insulation, 1 1/2" thick, avg 2" dia (for DOAS/RTU coils)	700	lf	12.69	8,883
	Pipe insulation, 1 1/2" thick, 3/4" dia (for CUHs & VAV box rhc)	110	lf	11.06	1,217
	<b>Heating</b>				<b>96,241</b>



**Hawley Elementary School**  
**Newton, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
 Date: 6-Nov-20

Description	Quantity	Unit	Unit Cost	Total
<b>Cooling</b>				
VRF system ceiling cassette, 1 1/2 tons cooling	83	ea	2,750.00	228,250
Condensing unit, 288 mbh	5	ea	43,350.00	216,750
Branch selector box	8	ea	10,065.00	80,520
Misc VRF system equipment (remote controllers, centralized controllers, BACNET hardware interfaces, power supplies, transmission booster, etc)	1	ls	47,300.00	47,300
Refrigerant piping (insulated) between indoor unit & branch selector box	1,600	lf	30.00	48,000
Refrigerant piping (insulated) between branch selector box & outdoor condensing unit	8,300	lf	25.00	207,500
Condensate drain piping incl insulation, avg 1" dia	2,490	lf	42.22	105,128
Split system ACU incl indoor unit, outdoor condensing unit & insulated refrig piping, for areas requiring 24/7 cooling	2	alw	9,500.00	19,000
<b>Cooling</b>				<b>952,448</b>
<b>Air Distribution</b>				
Dedicated outdoor air system unit, area B, 2300 cfm w/DX cooling HW heating, plate/membrane energy recovery & roof curb	2	ea	54,596.00	109,192
Dedicated outdoor air system unit, area B, 1700 cfm w/DX cooling HW heating, plate/membrane energy recovery & roof curb	2	ea	47,396.00	94,792
Dedicated outdoor air system unit, area C, 4000 cfm w/DX cooling HW heating, plate/membrane energy recovery & roof curb	1	ea	70,196.00	70,196
Packaged rooftop unit, Area C, 3000 cfm w/DX cooling, HW heating, energy recovery wheel & roof curb	2	ea	26,814.00	53,628
Demo exist 1997 wing RTU & replace with new pkg DX cooled RTU w/energy recovery wheel & curb adaptor (6 ea, total 20,250 cfm)	1	ls	198,850.00	198,850
Bi-polar ionization units (AtmosAir) for DOAS & RTU supply air	38,250	cfm	1.00	38,250
Sound attenuators for DOAS & RTU supply/return/exhaust ducts	76,500	cfm	0.50	38,250
VAV box w/hot water reheat coil (for 1997 area A)	3	ea	1,164.22	3,493
Clean (50%), pressure test (50%) & reseal (10%) of existing to remain ducts in 1997 areas	1	alw	10,000.00	10,000
Kitchen exhaust fan & ductwork	1	alw	15,000.00	15,000
HVAC systems for boiler & elec rooms - to remain as is				ETR
Galv steel duct for DOASs	24,000	lbs	12.33	295,920
Galv steel duct for area C RTUs	6,000	lbs	12.33	73,980
Duct insulation, external, thermal, 3/4 # density, 1 1/2" thick	25,950	sf	3.35	86,933
Duct insulation, external, thermal w/alum jacket for ductwork exposed at roof	208	sf	17.75	3,692
Air outlet, supply	75	ea	235.09	17,632
Air outlet, return/exhaust	48	ea	199.35	9,569
Manual balancing dampers	123	ea	136.31	16,766
Flexible duct	525	lf	25.93	13,613
Fire/smoke dampers, small (for 1921 area C)	8	alw	1,724.99	13,800
<b>Air Distribution</b>				<b>1,163,555</b>



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
 Date: 6-Nov-20

Description	Quantity	Unit	Unit Cost	Total
<b>Testing, Adjusting, and Balancing for HVAC</b>				
Testing, adjusting & balancing air & (new) water systems	430	hrs	105.00	45,150
<b>Testing, Adjusting, and Balancing for HVAC</b>				<b>45,150</b>
<b>Controls</b>				
DDC BAS system by ABS-DDC	1	ls	454,000.00	454,000
<b>Controls</b>				<b>454,000</b>
<b>HVAC Demolition</b>				
Demo all exist HVAC systems in 1921 area C (except perim heat)	19,870	sf	0.50	9,935
Demo exhaust ducts & fans in 1948 area B	21,876	sf	0.50	10,938
Demo exist split system ACUs in M206 & M207	2	ea	1,000.00	2,000
Demo exist split system ACUs in 1921 area C multipurpose room	4	ea	1,000.00	4,000
Demo misc items not identified above (allowance)	1	alw	10,000.00	10,000
<b>HVAC Demolition</b>				<b>36,873</b>
<b>Miscellaneous HVAC</b>				
Firesafing (at new penetrations only)	1	alw	5,000.00	5,000
Coord & As-Built (3% labor)	1	ls	41,400.00	41,400
Daily cleanup (3% labor)	1	ls	41,400.00	41,400
Small tools & consum (4% labor)	1	ls	55,200.00	55,200
Equip Rental (2% labor)	1	ls	27,600.00	27,600
Rigging/Cranes	1	ls	5,000.00	5,000
Startup (2% material)	1	ls	27,600.00	27,600
Warranty (0.5% material & labor)	1	ls	13,800.00	13,800
Supervision (8% labor)	1	ls	110,300.00	110,300
<b>Miscellaneous HVAC</b>				<b>327,300</b>

**TOTAL HEATING VENTILATING and AIR CONDITIONING**

**\$ 3,075,566**

**26 ELECTRICAL**

**Cabling, Conductors, Raceway**

New electrical equip & feeders for new mech motor/equip loads:

New primary power service duct bank (2x5")	100	lf	30.00	3,000
Excavation, backfill and concrete for primary duct bank	100	lf	20.00	2,000
Grounding for transformer	1	ea	1,100.00	1,100
New secondary power service duct bank (6x4")	50	lf	45.00	2,250
Excavation, backfill and concrete for secondary duct bank	50	lf	40.00	2,000
500 MCM XHHW str copper in duct bank	960	lf	15.00	14,400
#1/0 AWG XHHW str copper in duct bank	240	lf	4.11	986
New Main Switchboard 1600A 208V MCB w/1200A CB to backfeed existing Main Switchboard	1	ea	87,500.00	87,500
1200A feeder to backfeed existing MSB	100	lf	300.00	30,000
Splice 1200A feeder	1	ea	4,500.00	4,500
Panelboards for VRF feeders, 225A	1	alw	20,000.00	20,000
Connect to condensing unit with safety switch	5	ea	1,950.00	9,750



**Hawley Elementary School**  
**Newtown, CT**  
**HVAC Upgrade**

**Conceptual Estimate**

Gross Floor Area (sf): 62,921  
 Date: 6-Nov-20

Description	Quantity	Unit	Unit Cost	Total
Connect to DOAS with safety switch	5	ea	1,325.00	6,625
Disconnect existing RTU, leave feeder for re-use	6	ea	100.00	600
Connect new RTU to existing feeder, provide new safety switch	6	ea	700.00	4,200
Connect to 3000CFM RTU in area A with safety switch	2	ea	700.00	1,400
Connect to VRF cassettes in ceilings 1p20A	85	ea	263.00	22,355
160A motor feeder	1,000	lf	44.00	44,000
100A motor feeder	1,000	lf	33.00	33,000
30A motor feeder	440	lf	13.50	5,940
20A motor feeder	6,400	lf	12.00	76,800
Commissioning/Checkout/Test	1	ea	5,250.00	5,250
Remove light fixts in demo'd ceilings & later reinstall in new ceilings	252	ea	415.00	104,580
Remove, temporarily support & replace existing cameras, speakers, FA devices, WAPs, etc, mounted in ceiling, for removal & replacement of ceiling tiles/grid to allow installation of ductwork, refrigerant piping, electrical wiring	89	ea	50.00	4,450
Duct smoke detectors (1 per unit) & conns to fire alarm system	1	alw	20,000.00	20,000

**Cabling, Conductors, Raceway** **506,686**

**TOTAL ELECTRICAL** **\$ 506,686**