County of Milwaukee
INTEROFFICE MEMO

DATE: February 18, 2013

TO: Supervisor Dimitrijevic, County Board Chairwoman

FROM: Maria Costello, Director, Department of Charles Allis / Villa Terrace Art Museums

SUBJECT: **Capital Improvement Committee Process**

Issue

Milwaukee County Ordinance 36.04 requires all Departments to submit five-year capital improvement program (Program) requests to their respective standing committees. Standing committees shall then submit Programs along with recommendations to the newly created Capital Improvements Committee (CIC).

Background

The purpose of the CIC is to develop a Program for the entire County and establish criteria on how each capital project will be evaluated. The ordinance also requires Departments to submit Programs to their respective standing committees, which will then forward their recommendations to the CIC.

Request

The Department of Charles Allis / Villa Terrace Art Museums has evaluated its anticipated maintenance and facility needs. The attached includes the Department's outstanding capital needs, listed in priority order.

1) ***Replacement of Boiler at the Charles Allis Museum – see additional information on heating/cooling savings enclosed. This is a priority since one of three boilers stopped working winter 2012/2013***
2) ***Charles Allis Exterior Façade Repair including window and door replacement (as originally requested in the 2008 – 2012 5-year capital budget***
3) ***Charles Allis roof and drain repair as requested in the 5-year 2008 – 2012 capital budget***
4) ***Villa Terrace window and door replacement/repair/storm windows as there are currently no storms and causes additional costs in heating and cooling of facility***
5) ***Villa Terrace drain pipe repair***
6) ***Villa Terrace driveway repair or replacement***

Maria B. Costello
Director, Department of Charles Allis / Villa Terrace Art Museums

Cc: Chris Abele, County Executive
Amber Moreen, Chief of Staff, County Executive's Office
Kelly Bablitch, Chief of Staff, County Board
Michael Mayo, Sr., Chair, Transportation, Public Works, and Transit Committee
Willie Johnson, Jr., Co-Chair, Finance Personnel, and Audit Committee
David Cullen, Co-Chair, Finance Personnel, and Audit Committee
TBD, Chair, Capital Improvements Committee
TBD, CEX Appointee #1, Capital Improvements Committee
TBD, CEX Appointee #2, Capital Improvements Committee
Craig Kammholz, Fiscal & Budget Director, DAS
Brian Dranzik, Interim Director, Department of Transportation
Scott Manske, Comptroller
Vince Masterson, Strategic Asset Coordinator, DAS
Chris Lindberg, CIO, IMSD
Laurie Panella, Deputy CIO, IMSD
Pamela Bryant, Capital Finance Manager, Comptroller's Office
Justin Rodriguez, Capital Finance Analyst, Comptroller's Office
Gregory High, Director, AE&ES-FM-DAS

File No.

(Journal,)

(ITEM *) A resolution to authorize the attached Five Year Capital Improvements Program for the Department of Charles Allis / Villa Terrace Art Museums to be recommended to the Capital Improvement Committee (CIC):

A RESOLUTION

WHEREAS, the 2013 Adopted Capital Improvements Budget includes the creation of a Capital Improvements Committee (CIC); and

WHEREAS, ordinance 36.04 was also approved in 2013, which codified the creation, composition, duties, reports, and staffing of the CIC; and

WHEREAS, the purpose of the CIC is to develop a Five Year Program for the entire County and establish criteria on how each capital project will be evaluated; and

WHEREAS, the ordinance also requires Departments to submit Five Year Programs to their respective standing committees, which will then forward their recommendations to the CIC; and

WHEREAS, The Department of Charles Allis / Villa Terrace Art Museums has evaluated its anticipated maintenance and facility needs; and

WHEREAS, the attached Five Year Program includes the department's outstanding capital needs, listed in priority order; now, therefore,

BE IT RESOLVED, the attached Five Year Program (Exhibit A) is recommended to the CIC.

ATTACHMENT A

Department Name Charles Allis/Villa Terrace Art Museums
2014

Rank	Project Number	Project Name	Total Cost	Reimbursement Reven	County Financing	Project Description/Annual Operating Impact
1	NEW	Charles Allis Boiler Replacement		$0		replace nonfunctioning boiler with high efficiency unit
2	WO50701*	Charles Allis Exterior Façade Repair	$282,000		$282,000	*carry over from 2008-2012 5 -Year plan
3	WO12401	Charles Allis Window and Door Replacement	$261,450		$261,450	replace screen/storm windows with operable windows
4	WO50601*	Charles Allis Roof and Drain Repair	$151,000		$151,000	*carry over from 2008-2012 5 -Year plan
5						
6						
7						
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
Total			$694,450	$0	$694,450	

Department Name Charles Allis/Villa Terrace Art Museums
2015

Rank	Project Number	Project Name	Total Cost	Reimbursement Reven	County Financing	Project Description
1	WO50201*	Villa Terrace Drain Pipe Repair	$88,000		$88,000	*carry over from 2008-2012 5 -Year plan
2	WO12501	Villa Terrace Window and Door Replacement	$689,945		$689,945	windows and doors need screens, storms, hardware replacement
3						
4					$0	
5					$0	
6					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
Total			$777,945	$0	$777,945	

Department Name Charles Allis/Villa Terrace Art Museums

2016

Rank	Project Number	Project Name	Total Cost	Reimbursement Reven	County Financing	Project Description
1	NEW	Villa Terrace Driveway Replacement			$0	
2					$0	
3					$0	
4					$0	
5					$0	
6					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
Total			$0	$0	$0	

Department Name

2017

Rank	Project Number	Project Name	Total Cost	Reimbursement Reven	County Financing	Project Description
1	WXXXX	Example	$1,000,000	$0	$1,000,000	
2					$0	
3					$0	
4					$0	
5					$0	
6					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
Total			$1,000,000	$0	$1,000,000	

Department Name

2018

Rank	Project Number	Project Name	Total Cost	Reimbursement Reven	County Financing	Project Description
1	WXXXX	Example	$1,000,000	$0	$1,000,000	
2					$0	
3					$0	
4					$0	
5					$0	
6					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
					$0	
Total			$1,000,000	$0	$1,000,000	

MILWAUKEE COUNTY FISCAL NOTE FORM

DATE: 2/27/13

Original Fiscal Note ☒

Substitute Fiscal Note ☐

SUBJECT: Submission of the Charles Allis / Villa Terrace Art Museums 5 Year (2014 – 2018) Capital Improvement Budget

FISCAL EFFECT:

☒ No Direct County Fiscal Impact

☐ Existing Staff Time Required

☐ Increase Operating Expenditures
(If checked, check one of two boxes below)

☐ Absorbed Within Agency's Budget

☐ Not Absorbed Within Agency's Budget

☐ Decrease Operating Expenditures

☐ Increase Operating Revenues

☐ Decrease Operating Revenues

☐ Increase Capital Expenditures

☐ Decrease Capital Expenditures

☐ Increase Capital Revenues

☐ Decrease Capital Revenues

☐ Use of contingent funds

Indicate below the dollar change from budget for any submission that is projected to result in increased/decreased expenditures or revenues in the current year.

	Expenditure or Revenue Category	Current Year	Subsequent Year
Operating Budget	Expenditure		
	Revenue		
	Net Cost		
Capital Improvement Budget	Expenditure	0	0
	Revenue	0	0
	Net Cost	0	0

DESCRIPTION OF FISCAL EFFECT

In the space below, you must provide the following information. Attach additional pages if necessary.

A. Briefly describe the nature of the action that is being requested or proposed, and the new or changed conditions that would occur if the request or proposal were adopted.
B. State the direct costs, savings or anticipated revenues associated with the requested or proposed action in the current budget year and how those were calculated. [1] If annualized or subsequent year fiscal impacts are substantially different from current year impacts, then those shall be stated as well. In addition, cite any one-time costs associated with the action, the source of any new or additional revenues (e.g. State, Federal, user fee or private donation), the use of contingent funds, and/or the use of budgeted appropriations due to surpluses or change in purpose required to fund the requested action.
C. Discuss the budgetary impacts associated with the proposed action in the current year. A statement that sufficient funds are budgeted should be justified with information regarding the amount of budgeted appropriations in the relevant account and whether that amount is sufficient to offset the cost of the requested action. If relevant, discussion of budgetary impacts in subsequent years also shall be discussed. Subsequent year fiscal impacts shall be noted for the entire period in which the requested or proposed action would be implemented when it is reasonable to do so (i.e. a five-year lease agreement shall specify the costs/savings for each of the five years in question). Otherwise, impacts associated with the existing and subsequent budget years should be cited.
D. Describe any assumptions or interpretations that were utilized to provide the information on this form.

Department/Prepared By Charles Allis / Villa Terrace Art Museums – Maria B. Costello

Authorized Signature Maria B Costello

Did DAS-Fiscal Staff Review? ☐ Yes ☒ No

Did CBDP Review?[2] ☐ Yes ☐ No xNot Required

[1] If it is assumed that there is no fiscal impact associated with the requested action, then an explanatory statement that justifies that conclusion shall be provided. If precise impacts cannot be calculated, then an estimate or range should be provided.

[2] Community Business Development Partners' review is required on all professional service and public work construction contracts.

PARKS

CHARLES ALLIS
ART MUSEUM
1801 N. Prospect Ave., Milwaukee, WI 53202
Phone: 414•278•8295 Fax: 414•278•0335

VILLA TERRACE
DECORATIVE ARTS MUSEUM
2220 N. Terrace Ave., Milwaukee, WI 53202
Phone: 414•271•3656 Fax: 414•271•3986

www.cavtmuseums.org

Referred
FEB 25 2013
County Board
Chair

February 18, 2013

Chairwoman Marina Dimitrijevic
Milwaukee County Courthouse
901 North 9th Street, RM 201
Milwaukee, WI 53233

Dear Chairwoman Dimitrijevic and Supervisors,

I have included our 5-year Capital Improvement requests and wanted to send some additional information to you concerning projects we have undertaken at our own expense the last few years.

In 2011 we raised funds to replace the patio at the Charles Allis, which we considered a danger to the public. We widened the patio by 10', which would also allow us to hold larger events (and increase our revenue). We chose a stamped concrete, which should last much longer than the original blue stone slate. At the same time the contractor offered us a price break to replace our circle drive entrance on Royall.

This was a major bonus for the museum since it meant we could widen the drive and add a handicap ramp. Doing this meant we no longer had to have the sidewalk from the public walk on Prospect Ave into the Great Hall shoveled, saving us money and wear and tear on the patio. Previously, it was the only way in for anyone wheelchair bound or anyone who could not handle steps.

Many people have commented on the ease of now being able to be dropped off in the circle drive and access the building from the front door.

Last spring we replaced the terrace at Villa Terrace. The Friends of Villa Terrace raised $20,000 towards this project and the initial bids came in around the low $30,000's. Once the original brick was torn off, it was apparent that the bladder lining needed replacing and some additional structural items needed attention. The cost then went to just over $62,000 and the museum paid over $40,000 to have the work completed.

As you can see, we are not coming to the county on a regular basis with our hands out asking for help. We understand the financial constraints of the county and moved forward on these projects. I believe the CAVT board and staff have been good stewards for these museums. We continue to look at ways to repair and maintain the buildings in the most economical and efficient ways possible. There are major items we need to keep these buildings lasting another 100+ years.

I have added a boiler for the Allis to our capital improvement list. We have "milked" one of the three boilers and it finally gave out this winter. We are working on two boilers and living with temps in the mid 50's to low 60's in the historic part of the mansion. Not ideal, but doable.

And the driveway at the Villa needs attention. It has some very low spots that hold water when it rains and ice when winter hits. So you'll see these two items added to my "wish list".

Funny, I found a copy of the 2008 - 2012 5-year plan and of the four items requested, one was completed (WO50401 - Charles Allis wiring replacement). So I have added the remaining three items to my list. It makes complete sense that if the façade is being fixed at the Allis, the windows and doors should be repaired/replaced and the roof and drainpipes be considered.

Sincerely,

Maria B. Costello

Maria Costello
Executive Director

April 4, 2012

TO: Maria Costello
Charles Allis Museum
1630 E. Royall Place
Milwaukee, WI 53202

FROM: James Maletta
RE: RECOMMENDATIONS FROM THE ENERGY ASSESSMENT

The following memo is a summary of findings and recommendations resulting from the 4.5 hour energy audit of the museum which was conducted on March 28, 2012. There are a number of significant improvements which can be made to improve the energy efficiency of the museum complex. These improvements are expected, if fully implemented, to significantly reduce the annual operating costs of this facility by reducing energy expenditures for natural gas and electricity. Given the condition of some of the equipment and building components, the recommended measures will also reduce annual repair and maintenance costs. Most of these improvements will have substantial up-front investments costs, but they will prove to be financially beneficial over the long term. Most of them will pay for themselves in 10 years or less.

HVAC SYSTEMS

The primary heating system for this facility is a steam boiler rated for 1,820,000 Btu input. The system dates to about 1983 and it is definitely well past its prime. It is a tandem system (2 boilers working as one) with one half of the system being non-functional. This system provides heat for the basement, 1st and 2nd floors of the main mansion. It is substantially over-sized for the area which it is heating. There is also a hot water boiler which provides heat for the 3rd floor of the mansion which houses the administrative offices and some storage space. This system is of the same age as the main boiler. It is rated for 350,000 Btu input. This is also substantially over-sized for the space it is heating.

Given the age, condition and low efficiency levels of this equipment, I would recommend having the stream boiler upgraded to a smaller capacity system of at least 81% AFUE and I would recommend upgrading the hot water boiler to a 90%+ AFUE sealed combustion system. The energy savings from these upgrades is estimated to save the museum $2,289.00 per year or $22,890.00 over 10 years assuming stable natural gas prices.

In addition to the boiler upgrades, it is recommended that the older pneumatic temperature controls be upgraded to digital programmable thermostats. This will allow for more precise control of temperatures in different parts of the building allowing for the possibility of about 3% additional savings.

The great hall and the entry foyer are heated by three 92% AFUE high efficiency furnaces. Because of

their high level of efficiency, there will be little additional energy savings to be gained from upgrading them, but it is important to note that they were all manufactured in the mid 1990s. They are estimated to be about 16 years old. Normal life expectancy for this type of heating system is 18-20 years. Plans should be made for the near future replacement of these units.

There are a total of 6 air conditioning units installed to cool the facilities. All the accessible systems date from 2006 and 2007 and they have efficiency levels of 10 SEER. These systems have a typical life expectancy of 18-20 years, so the need to replace them is not anticipated in the near term. When the time does come, I would recommend installation of units with 17 SEER ratings or higher given the unfortunate trend of regular annual increases in electricity rates we have been experiencing.

INSULATION

Improvement of the insulation in the shell of the buildings is another area where significant energy can be saved for both heating and cooling. The great hall and adjacent areas are of newer construction and they are better insulated. Some improvement could be made, but the savings would definitely be a long-term investment and would not be worth considering at this time. The exterior walls of the main mansion building are solid masonry on all three floors and these cannot be insulated. The third floor level which houses the administrative offices could definitely benefit from insulation improvements.

A. Flat ceilings of the 3rd floor should be drilled from the interior and blown with either cellulose or Johns Mansville spider fiberglass insulation to the maximum capacity of the framing cavities. This will save about $340.00 per year in energy.
B. Sloped ceilings of the 3rd floor should be dense-packed with either cellulose insulation of the Spider fiberglass insulation. Most of these cavities can be accessed from the small eave attic spaces around the perimeter of the 3rd floor. Some interior drilling will be needed. This will save a minimum of $123.00 per year.
C. The kneewalls which separate the eave attic spaces from the third floor rooms should be insulated with a layer of R13 fiberglass batt insulation in the wall cavities and an additional layer of R13 running horizontally across the walls. The insulation should be covered with house-wrap stapled to the framing to cover the insulation. Some of these attic spaces have accesses, but most of them will require the insulators to cut temporary accesses into them to do the work. This improvement will have about $243.00 per year in energy.

In total, the insulation of the third floor will save an estimated $706.00 per year in energy.

LIGHTING

Electricity usage totals about $10,661.00 of the annual operating budget of the facility and it is actually more expensive than the natural gas which totals $7,780.00 per year. Electricity used for lighting represents a significant portion of the total electrical use in a facility of this type. In surveying the lighting throughout the facility, not one energy efficient bulb was found, so there is clearly some significant energy savings to be had in upgrading the lighting.

In the area of energy efficient lighting there are two choices in bulbs available. Compact Florescent Lights (CFL) use ¼ the electricity of incandescent bulbs for the equivalent lumen light output. These bulbs come in a variety of shapes and sizes to fit all types of fixtures. Most CFLs can be installed in place of incandescent bulbs without having to replace the fixtures. The better quality CFLs will last 5 years. Beginning an immediate maintenance campaign to replace burnt out lights with CFLs will reduce power consumption and maintenance costs for bulb replacement over time.

The second option is to upgrade the lighting to LED bulbs. LEDs have been around a while but they are certainly newer to the market and the prices are still somewhat high (prices range from $29 to $79 per bulb). These bulbs are available in a wide variety of sizes spaces and even different colors. They generally use less power than CFLs. The price is somewhat offset by the longevity of the bulbs. The typical incandescent bulb will last 750 to 1000 hours. An LED bulb can last 35,000 hours. This would represent 13-15 years of typical use.

Assuming an average of 7 hours of use per day, switching the exterior lighting of the facility to LED bulbs could save about $439.00 per year in electricity or $5,707.00 over 13 years. The upgrade would cost about $2,870.00 to implement.

Upgrading all the lighting on the 3rd floor to appropriate sizes and types of LED bulbs could cost $2,891.00 to implement with $504.00 per year in savings.

Upgrading the remainder of the facility lighting to LEDs could cost about $14,076.00 with additional savings of $586.00 per year or $7,618.00 over 13 years. The simple reason why this portion is not as cost effective is that there are a large number of small candelabra bulbs in sconce lights on the first and second floors which will be quite expensive to replace.

There are other factors to consider. The cost of replacing regular light bulbs over the same 13 year period is estimated at $8,925.00. There is also the hidden maintenance cost of replacing thousands of light bulbs. All in all, the numbers would seem to indicate that it would be worthwhile to begin upgrading lighting to LEDs starting with the exterior and the 3rd floor offices.

OTHER AREAS FOR SAVINGS

There are two older refrigerators in the basement of the hall. Upgrading these 2 pad-locked units to Energy Star certified models of the same capacity would save about $130.00 per year in electricity.

There are a total of 17 windows on the older sections of the facility which are missing storm windows.

Wood trim is in need of painting and caulking and some cracked and split wood frames could benefit from at least being repaired with injected epoxy wood filler. These improvements will reduce air infiltration through the windows and contribute to energy efficiency. There is a large section of stained glass windows (9 totals) on the north side of the mansion which have no storm windows. These are fixed position windows. I would recommend the installation of 3/8 inch Lexan storm windows to cover these works of art. This is recommended for 2 reasons: the storm windows will provide additional energy savings and the Lexan in that thickness is bullet resistant and will provide a significant protection of the stained glass from vandalism or damage from severe weather. There are 7 fixed position windows to the west of the public entry which could also benefit from the installation of custom made fixed position storm windows. The wood trim of all of these windows will need painting prior to installing the storms.

Older double-hung windows tend to have significant air leakage through the pulleys. To reduce this air leakage, I would recommend the installation of **pulley seals** over the pulleys. Pulley seals are small gasketed plastic covers which can be screwed over the pulleys. They allow the sash chain to pass through them while eliminating most of the air leakage. These seals are available in dark brown and white, so they can blend natural wood work or white painted wood work. There are 59 double-hung windows with pulleys. This improvement could eliminate about 470 CFM of air leakage with an energy savings of about $150.00 per year.

I hope these recommendations will be of help to you in planning for a more energy efficient future for the Charles Allis Museum. Please feel free to call me or e mail if you have any questions or need any additional data.

DILLETT MECHANICAL SERVICE
21625 DORAL ROAD
WAUKESHA, WI 53186
BUS. (262) 650-0770
FAX (262) 650-0880

AIR CONDITIONING • HEATING • SHEETMETAL • REFRIGERATION • PLUMBING

May 31, 2012

Ms. Maria Costello
Charles Allis Art Museum
1801 N Prospect Ave
Milwaukee, WI 53202

Dear Maria,
Dillett Mechanical Service, Inc. proposes the following for the replacement of the steam and hot water boilers at your facility:

Scope of Work:

- Demo and remove from site both of the existing boilers – one being steam and the other is hot water
- Set in place (2) two new 400,000 BTU NTI LX400 Trinity, high efficiency, condensing boilers (94% efficiency rating)
- Supply and install (1) one 100,000 BTU hot water coil in the ductwork serving the main floor air handling unit (currently a cooling only machine)
- Pipe the new boilers into the existing hot water system
- Supply and install the hot water supply/return loop piping for the new coil at the air handler
- Supply and install (3) three new circulating pumps (two for the boiler primary loop and one for the new main floor loop)
- Supply and install the vent and intake piping for the (2) two new boilers
- Line voltage wiring is included
- Piping insulation included (450' approximately)
- System flush included
- Gas piping to the new boilers
- Controls with unit equipped reset and lead/lag included
- Permits included
- Fill and start
- One year of service included

The above for the net sum of:
Eighty-One Thousand, Nine Hundred Dollars.....$81,900.00

Note: We specifically exclude any asbestos abatement.

Thank you for the opportunity to be of service. If you have any questions, please feel free to contact me at (262)717-0770 or on my cell phone at (414)232-3053.

Sincerely,
Dillett Mechanical Service, Inc

Glenn O Hudson
Sheet Metal Department Manager

Cc: Tom Dillett
Service Manager

Accepted Purchaser:

By: Maria B. Castillo

COMMERCIAL INDUSTRIAL HVAC
DILLETT
MECHANICAL SERVICE

DILLETT MECHANICAL SERVICE
21625 DORAL ROAD
WAUKESHA, WI 53186
BUS. (262) 650-0770
FAX (262) 650-0880

AIR CONDITIONING • HEATING • SHEETMETAL • REFRIGERATION • PLUMBING

September 14, 2012

Subject: Charles Allis Art Museum

It is Dillett Mechanical Service Inc.'s professional opinion that the Weil Mclain steam boiler serving the Charles Allis Art Museum is at the end of its useful life. The vessel has begun to leak steam and condensate from two of the rear cast iron sections and is dripping on the burner section. This in turn is hampering the gas and air mixture to the boiler.
Because of the designed purpose of the boiler; having leaks in these critical sections presents a serious safety issue that we cannot ignore.

Therefore, due to the above situation, we cannot perform a proper start up on this boiler and certify it safe for the upcoming season operation.

Thank you for the opportunity to be of service if you have and questions or concerns, please feel free to contact me on my cell at 414-331-6409 or the office at 262-650-0770

Sincerely,
Dillett Mechanical Service, Inc.

Tom Dillett

Tom Dillett
Service Manager

	Weather Normalized Electric Consumption	Weather Normalized Gas Consumption MMBTu	Therm		Actual Electric Consumption	Actual Gas Consumption
May-11	5,600	480	480		5,600	480
Jun-11	6,480	0	0		6,480	0
Jul-11	10,080	0	0		10,080	0
Aug-11	8,640	0	0		8,640	0
Sep-11	6,400	0	0		6,400	0
Oct-11	5,440	438,000	438		5,440	438
Nov-11	6,000	751,000	751		6,000	751
Dec-11	6,480	1,941,000	1,941	estimated	6,480	1,941
Jan-12	6,480	1,941,000	1,941		6,480	1,941
Feb-12	6,480	1,941,000	1,941	estimated	6,480	1,941
Mar-12	6,080	1,127,000	1,127		6,080	1,127
Apr-12	6,240	717,000	717		6,240	717
	80,400		**9,336**		**80,400**	**9,336**

Peak kW from Utility D: 3

SAVINGS SUMMARY

Measure	Electric kWh	Heating Therms
Space heating Upgrades -- Insulation		787
Space heating Upgrades -- New boilers		1,954
Space cooling Upgrades --Insulation	5,920	
Control Upgrades	600	
	6,520	2,741
% of actual baseline	8.1%	29.4%
% of weather normalized baseline	8.1%	29.4%

Total savings Summary - based on actual utility data

Utility	Building Energy Use		Energy Savings			% Savings
Electricity	80,400 kWh	274,325 kBTU	6,520	kWh	22,246 kBTU	8.1%
Gas	9,336 Therms	933,600 kBTU	2,741	Therms	274,100 kBTU	29.4%
	Total	1,207,925 kBTU		Total	296,346 kBTU	24.5%

Total savings Summary - based on weather normalized utility data

Utility	Building Energy Use		Energy Savings			% Savings
Electricity	80,400 kWh	274,325 kBTU	6,520	kWh	22,246 kBTU	8.1%
Gas	9,336 Therms	933,600 kBTU	2,741	Therms	274,100 kBTU	29.4%
	Total	1,207,925 kBTU		Total	296,346 kBTU	24.5%